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Hoyet Wilson, CPA, is a holder of the Certificate in Management Accounting and an associate professor at Eastern Oregon State College in La Grande, Oregon.

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Pollution Control Revenue Bond Financing In The South

1971-1978

by

Hoyet W. Wilson

Introduction

The pollution control revenue bond is a Cinderella instrument of corporate finance. Interest rates in the municipal bond market are lower than in the corporate bond market for the reason that municipal bond yields are tax exempt. The pollution control revenue bond is the glass slipper whereby corporations may dance in the low cost municipal bond market.

The pollution control revenue bond is a very appropriately named financial instrument. The proceeds of the bond issue are used to finance the acquisition or construction of pollution control equipment, hence the name "pollution control" bonds. They are termed "revenue" bonds because the pollution control facilities may be leased to an industrial corporation, which makes lease payments that provide the revenue or cash flow to repay the bond principal at maturity and to pay the interest on the pollution control bond issue. Thus a pollution control bond is used to finance pollution control equipment and the lease payments on the equipment serve to extinguish the pollution control bond liability. In our analogy with Cinderella, the corporation's need to finance pollution control equipment (non-earning assets) is the pumpkin; low interest rates in the municipal bond market transform the pumpkin into something of a shining carriage.

Structure of the Paper

This paper is divided into three sections. The first section examines the mechanics of a pollution control revenue bond (PCRB) issue. It is helpful to understand the parties to and structure of PCRB issues before an analysis of PCRB financing in the south is undertaken. The second section examines the level of and trend of pollution control revenue bond financing in the United States, followed by an in-depth analysis of PCRB financing in ten southern states. Special emphasis is placed upon the aggregate level and trend of pollution control revenue bond financing in the south in relation to U. S. PCRB financing. The third section presents the results of a survey of the investment banking community regarding investors' perceptions of the pollution control revenue bond market and investment bankers' perceptions of the PCRB market. The three sections taken together will aid in undertaking the financing of environmental quality control in the south.

The Mechanics of Pollution Control Revenue Bond Financing

Pollution control revenue bond financing is generally a combination of industrial revenue bond financing and leveraged lease financing. The owner enters into the appropriate contractual arrangement with a political subdivision of the state and then into a lease arrangement with the corporation. The political subdivision issues industrial development bonds and uses the proceeds to finance the "leveraged" part of the equipment. The lease is designed to insure that all of the owner's obligations to the political subdivision will be discharged by the lease payments made by the corporation and provides that the owner has no responsibility for any failure on the part of the corporation.

For tax purposes the lease is a "true" lease such that the corporation is able to deduct the entire amount of the lease payments as a current business expense.

If a corporation enters directly into a pollution control revenue bond issue without utilizing a leveraged issue, the legal structure falls within the following three general patterns: the loan or direct purchase method, the installment sale method, or the lease purchase method.[1] Two ingredients are common to all of these patterns: the payment of the bond is secured by a contractual obligation between the corporation and the political subdivision; and the corporation receives title to the equipment, either at the outset of the transaction or upon final payment of its contractual obligation.[2]

Institutions involved in a pollution control revenue bond transaction usually include a governmental unit, a user or users of the pollution control equipment such as a corporation, an investment banking firm, and a trustee. The first example diagrammed is the $40 million pollution control revenue bond issue of the Sabine River Authority of Texas in 1977. The sequence of transactions appears in Figure 1.

The Authority is a political subdivision of the State of Texas. The Authority received a ruling from the Internal Revenue Service to the effect that interest on the bonds issued to finance the facilities would be exempt from Federal income taxes because substantially all of the proceeds would be used to provide air or water pollution control facilities. In the opinion of bond counsel, interest on the bonds was exempt from all Federal income taxes under existing statutes, regulations, rulings, and court decisions. The bond ratings assigned by Moody's and Standard and Poor's were Aa and AA respectively.

The proceeds from the sale of the bonds were used to provide funds for the acquisition and construction of certain pollution control facilities to serve electric generating units of Dallas Power and Light Company, Texas Electric Service Company and Texas Power and Light Company, which are 100 per cent owned subsidiaries of the Texas Utilities Company. The facilities financed with the proceeds of the bond issue were acquired by the Sabine River Authority and then sold, in accordance with an installment sales agreement, to Texas Utilities Service Company, also a 100 per cent owned subsidiary of Texas Utilities Company. The function of the service company is to furnish engineering, financial and other services at cost to the System companies. The bonds represent special obligations of the Sabine River Authority payable solely from and secured by an irrevocable first lien on the installment sales agreement payments made by the three operating companies to a debt service fund established by the Authority with the trustee, the Republic National Bank of Dallas. On a consolidated financial statement basis, Texas Utilities Company is the owner of the pollution control facilities and takes depreciation on the facilities. The net result is that Texas Utilities financed pollution control capital expenditures in the low cost municipal bond market.

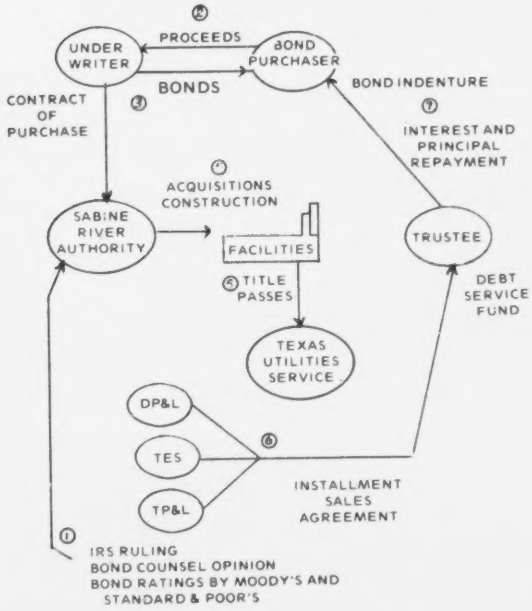
The second example diagrammed is the $22.8 million pollution control revenue refunding issue of Gulf States Utilities in 1977. The sequence of transactions appears in Figure 2. As part of the refunding, proceeds were invested in government securities, the interest from which was used to meet interest and principal repayments on a prior bond issue. Also involved in the sequence was a lease of equipment by the company to the Industrial Development Board of the Parish of Calcasieu and then a sublease of the facilities to Gulf States Utilities, the sublease rentals being sufficient to pay interest and principal on the refunding issue. The net result is that Gulf States Utilities financed pollution control facilities and refunded a prior bond issue, both through the municipal bond market.

Two interesting variations of pollution control financing are Exxon's bypass of the investment banking community to market pollution control revenue bonds and the use of pollution controlbond anticipation notes by Virginia Electric and Power Company. Exxon employed a Dutch auction to market pollution control bonds directly to the general public and thereby eliminated underwriting commissions.[3] Virginia Electric and Power's use of pollution control anticipation notes was intended to employ low interest, tax exempt funds as early as possible in the construction process involving pollution control facilities. Because total project costs could not be predicted, the bond anticipation notes were sold with serial maturities and as series became due, they were "rolled over" as in the practice of commercial paper. Upon completion of the project, pollution control revenue bonds were used to refund the anticipation notes.[4]

Pollution Control Revenue Bond Volume to Date

According to a statistical study developed by the U. S. Department of Commerce's Bureau of Economic Analysis, $18.7 billion was spent in 1972 for anti-pollution purposes.[5] These expenditures amounted to 1.6 per cent of gross national product in that year.[6] Spending to reduce emissions of pollutants totaled $16.8 billion in 1972; of this amount $5 billion was spent on equipment and $4 billion was spent on operating expenses.[7] Not all expenditures on equipment were financed by pollution control revenue bonds, however. For example, $18 million or only 50 per cent of pulp and paper industry environmental protection capital expenditures was financed by tax-exempt bonds in 1973.[8] This may be partly explained by the fact that pollution control revenue bonds depend upon favorable IRS rulings. Charles Harman, a vice president at the investment banking

Figure 1. The Sequence of Transactions in the Sabine River Authority 1977 Pollution Control Revenue Bond Issue



Source: **Prospectus of the Sabine River Authority of Texas Pollution Control Revenue Bonds. Series 1977.**

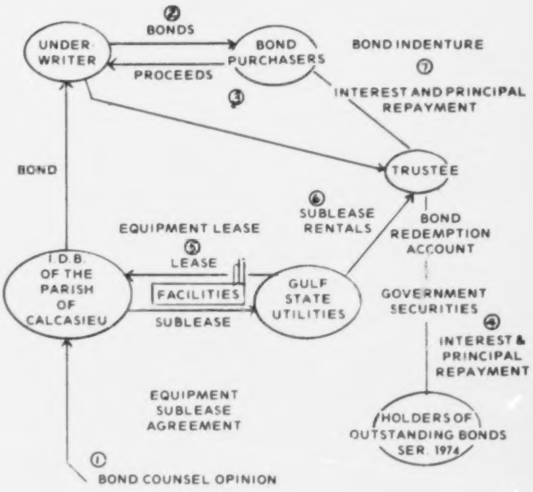
firm of Goldman, Sachs stated that pollution control revenue bonds would finance 25 per cent of the $25 billion he estimated that industry would spend on pollution control from 1973 to 1980.[9]

Pollution control revenue bond financing began with U. S. Steel's initial $5 million issue on April 6, 1971.[10] According to **Moody's Bond Record**, the total dollar volume of pollution control revenue bonds issued from April 1971 through December 1978, inclusive, was $11,882,059,000. The breakdown of the total volume by years is as follows:

1971	$102,910,000
1972	490,915,000
1973	1,591,175,000
1974	1,647,260,000
1975	1,999,970,000
1976	1,953,320,000
1977	2,279,004,000
1978	1,817,505,000

The compound annual growth rate from 1971 through 1978 is 51 per cent. Clearly the market for pollution control revenue bonds is becoming an increasingly important market.

Figure 2. The Sequence of Transactions in the Gulf States Utilities 1977 Pollution Control Revenue Bond Issue



Source: **Preliminary Statement of Issue of Pollution Control Revenue Bonds by the Industrial Development Board of the Parish of Calcacieu**

There has been a substantial amount of PCRB financing in the South. The total volume of pollution control revenue bond financing in the ten Southern states ranked by importance from 1971 through 1978 is shown in Table I. As shown in the table, PCRB financing has been employed to the greatest extent in Alabama, 59 issues totaling $589,800,000. Pollution control revenue bond financing from 1971 through 1978 has exceeded $300 million in three other Southern states: Louisiana ($546 million), Georgia ($438 million), and Florida ($435 million). Through December 1978, 327 PCRB issues were utilized to finance environmental quality in the South.

What has been the total yearly dollar volume of pollution control revenue bond financing in the South from 1971 through 1978? This is shown in Figure 3. Total yearly volume increased from a modest $24 million in 1971 to $650 million in 1975 and has exceeded $400 million in 1977 and 1978. The total yearly dollar volume in the South for the recent eight years is as follows:

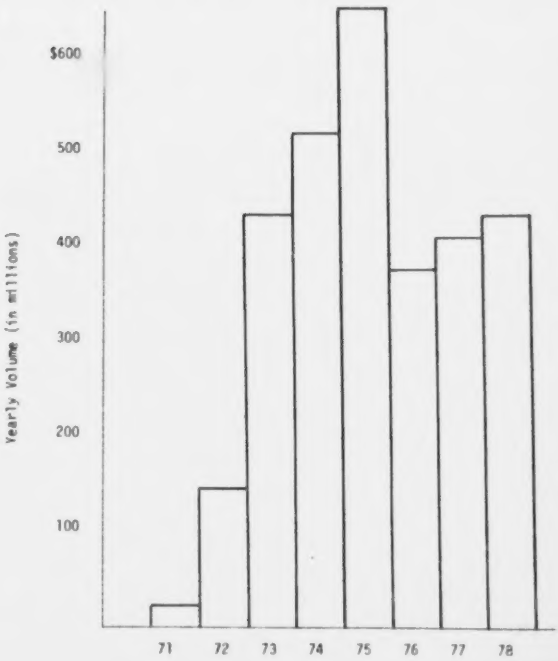
TABLE I
THE TOTAL VOLUME OF POLLUTION CONTROL REVENUE BOND FINANCING IN TEN SOUTHERN STATES RANKED BY IMPORTANCE
1971-1978

		Volume	Number of Issues
1.	Alabama	$589,800	59
2.	Louisiana	545,995	49
3.	Georgia	438,340	45
4.	Florida	435,020	59
5.	Kentucky	299,805	29
6.	Virginia	296,300	35
7.	Mississippi	175,900	13
8.	Tennessee	108,185	22
9.	South Carolina	101,589	15
10.	North Carolina	2,000	1
		$2,992,934	327

Source: **Moody's Bond Record,** January 1979

1971	$24,400,000
1972	146,390,000
1973	432,450,000
1974	518,930,000
1975	651,170,000
1976	371,805,000
1977	419,194,000
1978	428,595,000

Figure 3: The Total Yearly Dollar Volume of Pollution Control Revenue Bond Financing in Ten Southern States
1971-1978



Source: **Moody's Bond Record**, January 1979

TABLE II.
THE YEARLY VOLUME OF POLLUTION CONTROL REVENUE BOND FINANCING IN TEN SOUTHERN STATES
1971-1978
[in thousands]

	1971	1972	1973	1974	1975	1976	1977	1978	Total
1. Alabama	$ 8,500	$ 30,500	$ 88,500	$ 97,300	$123,950	$ 92,200	$ 60,400	$ 88,450	$ 589,800
2. Florida	——	43,040	118,650	79,075	69,480	69,360	36,015	19,400	435,020
3. Georgia	11,000	44,750	76,000	——	61,700	50,965	22,100	171,825	438,340
4. Kentucky	2,400	——	19,250	23,000	74,400	38,010	44,100	98,645	299,805
5. Louisiana	——	21,200	47,600	165,680	178,250	56,350	61,965	14,950	545,995
6. Mississippi	——	2,300	17,250	71,125	——	——	82,400	2,825	175,900
7. North Carolina	——	——	——	——	——	——	——	2,000	2,000
8. South Carolina	——	4,600	32,100	11,800	3,650	18,000	8,989	22,450	101,589
9. Tennessee	——	——	6,000	7,000	63,690	14,820	14,525	2,150	108,185
10. Virginia	2,500	——	27,100	63,950	76,050	32,100	88,700	5,900	296,300
Total	$24,400	$146,390	$432,450	$518,930	$651,170	$371,805	$419,194	$428,595	$2,992,934

Source: **Moody's Bond Record**, January 1979

The compound annual growth rate from 1971 through 1978 is 51 per cent. This matches the compound annual growth rate for the United States. Clearly the market for PCRB financing is becoming increasingly important to the South.

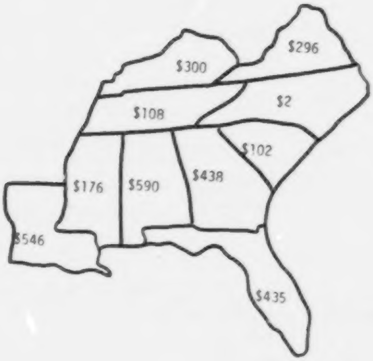
The yearly volume for PCRB financing in each of ten Southern states is presented in Table II. Total volume in 1971 was $24,400,000. The first pollution control revenue bond issue in the South was Enbee Corporation's $2,400,000 financing in September 1971 in Campbell County, Kentucky.[11] As shown in Table II, total PCRB financing peaked in 1975. The largest pollution control revenue bond financing to date in the South is Exxon Corporation's $110,000,000 issue in East Baton Rouge Parish, Louisiana in April 1974. The total PCRB financing to date in each state in the South is shown in Illustration 1. The financing of environmental quality control through the PCRB market has been important to every Southern state with the exception of North Carolina.

Yearly pollution control revenue bond financing for environmental quality control in the South has ranged from about 19 per cent to 32 per cent of the total U. S. PCRB market. (Refer to Figure 4.) In 1971 total pollution control revenue bond financing was $102,910,000, as shown on page 9. Total PCRB financing in the South in 1971 was $24,400,000, as shown on page 6. Thus, in 1971 the South accounted for 24 per cent of the total U. S. PCRB market. Pollution control revenue bond financing in the South as a per cent of the total U. S. PCRB market for the most recent eight years was: 1971, 24 per cent; 1972, 30 per cent; 1973, 28 per cent; 1974, 32 per cent; 1975, 33 per cent; 1976, 19 per cent; 1977, 18 per cent; and 1978, 24 per cent. For the most recent eight years pollution control revenue bond financing in the South has accounted for 25 per cent of the total U. S. PCRB market.

The Survey of the Market

A survey questionnaire was designed and sent to 21 investment banking firms regarding the market for pollution control revenue bonds. The questionnaire is presented in the appendix to this paper. From the 21 investment banking firms, replies were received from 10 firms producing a response rate of 48 per cent. The results of the survey are presented in Table II.

Illustration 1. The Total Dollar Volume of Pollution Control Revenue Bond Financing in Ten Southern States 1971-1978 (in millions)



Source: **Table II**

The **first question** asked the respondent was what relevant interest rates and what factors are considered in setting the nominal rate of interest on new PCRB issues. The respondents indicated a wide range of items taken under consideration. The most comprehensive listing came from a respondent at a major investment banking house in New York.

1. Rating of company, 2. Type of company (utility or industrial), 3. Reputation of company (household name or little known name), 4. Rates on recent pollution control revenue bonds of similar size and quality, 5. State in which the bonds are issued, and 6. Condition of overall market.

The conclusion is that a wide range of factors are considered in establishing nominal rates of interest for new PCRB issues.

The **second question** asked the respondent was whether there is a lack of familiarity with pollution control revenue bonds by many investors. To this 60 per cent of the respondents indicated there was not a lack of familiarity by investors. The respondent at Morgan Stanley commented: "Tremendous strides have been made by Wall Street firms in recent years in educating themselves and others." The conclusion is that the majority of the respondents believe there is not a lack of familiarity of investors with PCRB's.

The **third question** asked the respondent was whether the system of bond ratings on pollution control revenue bonds employed by Moody's and Standard & Poor's was considered satisfactory. Since 90 per cent of the respondents replied in the affirmative, the conclusion is that the investment banking firms surveyed are satisfied with the present system of bond ratings.

The **fourth question** asked the respondent was whether there is presently a well-developed market for PCRB's with institutional investors. The respondent at Morgan Stanley observed that the market for pollution control revenue bonds is not as broad as the market for general obligations and revenue bonds. However, all respondents replied in the affirmative indicating those surveyed believed the market for pollution control revenue bonds is well developed.

The **fifth question** asked the respondent was whether he noticed a trend toward longer maturities for PCRB's since 1975. Sixty per cent of the respondents replied in the affirmative indicating a majority of the respondents believed corporations are financing pollution control equipment over longer periods.

Figure 4: Yearly Pollution Control Revenue Bond [PCRB] Financing in Ten Southern States as a Per Cent of Total U. S. PCRB Financing 1971-1978

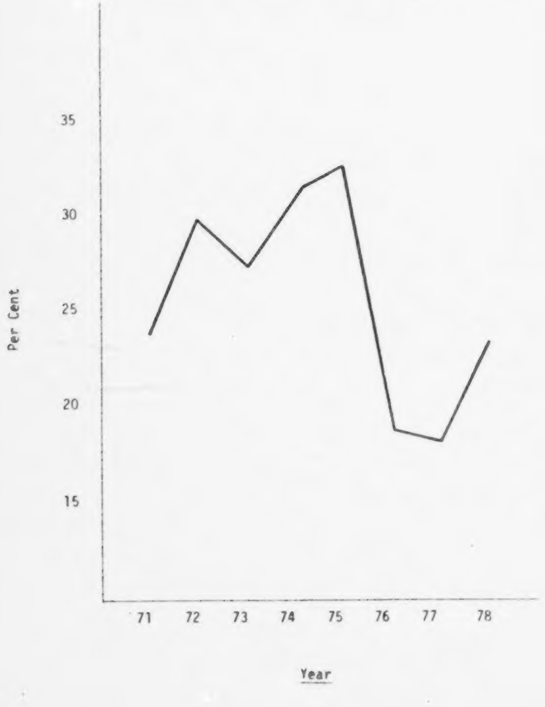


TABLE II
A TABULATION OF THE RESULTS OF THE SURVEY

Question	Yes	No
2. Is there a lack of familiarity with pollution control revenue bonds by many investors?	40%	60%
3. Are you satisfied with the present system of bond ratings on PCRB's presently employed by Moody's and Standard & Poor's?	90%	10%
4. Is there presently a well-developed market for PCRB's with institutional investors?	100%	0%
5. Have you notice a trend toward longer term pollution control bond maturities since late 1975?	60%	40%

Source: **Survey questionnaire prepared for this paper [see Appendix]**

Summary and Conclusions

Pollution control revenue bond (PCRB) financing offers a corporation a means of financing non-earning assets, viz., pollution control equipment, in the low-interest, tax-exempt municipal bond market. As a Cinderella instrument of finance, there is every reason to believe pollution control revenue bond financing may continue in importance in the South in the years to come.

Pollution control revenue bond financing in the South from 1971 through 1978 totaled $2,992,934,000 consisting of 327 issues. The market grew at a compound annual growth rate of 51 per cent. From 1971 through 1978 PCRB financing in the South represented 25 per cent of the U. S. PCRB market. PCRB financing has been most important in Alabama ($590 million), Louisiana ($546 million), and Georgia ($438 million). Pollution control revenue bond financing has been and will continue to be important in maintaining a quality environment in the South.

FOOTNOTES

[1] Thayer, Donovan S., "Financing Pollution Control," **Credit and Financial Management**, November 1973, p. 31.

[2] **Ibid.**, p. 31.

[3] "Exxon Corp. Seen Bypassing Wall Street, Offering New Debt Directly to the Public," **The Wall Street Journal**, October 27, 1976, p. 39.

[4] "Virginia E. & P. Cuts Cost of Antipollution," **The Wall Street Journal**, December 10, 1973, p. 22; O. J. Peterson, III, "Pollution Control Bond Anticipation Notes," **Public Utilities Fortnightly**, January 17, 1974, p. 34.

[5] "Pollution Control Expenditures at about 1.6 Percent of GNP," **Commerce Today**, March 17, 1975, p. 15.

[6] **Ibid.**, p. 15.

[7] **Ibid.**, p. 15.

[8] "Environmental Protection Expenditures Continued to Increase During 1973," **Paper Trade Journal**, September 9, 1974, p. 35.

[9] "The Tax Break in Antipollution Bonds," **Business Week**, July 29, 1972, p. 50.

[10] **Moody's Bond Record**, January 1979, p. 95.

[11] **Ibid.**, p. 91.

APPENDIX

QUESTIONNAIRE ON POLLUTION CONTROL REVENUE FINANCING

1. In setting the nominal rate for a new pollution control revenue bond issue, what relevant interest rates do you examine and what factors do you consider?

For each question below, please indicate your observation(s):

	Yes	No	No Observation
2. Is there a lack of familiarity with pollution control revenue bonds by many investors? Comments:	___	___	________
3. Are you satisfied with the present system of bond ratings on PCRB's presently employed by Moody's and Standard & Poor's? Comments:	___	___	________
4. Is there presently a well-developed market for PCRB's with institutional investors? Comments:	___	___	________
5. Have you noticed a trend toward longer term pollution control bond maturities since late 1975? Comments:	___	___	________

(Signed)______________________________
Title

Please return this questionnaire to: Hoyet Wilson, P. O. Box C-44, SRSU, Alpin, Texas 79830.

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Tunica **Drexel** Chemicals	60
Sherman **Barclay Furniture Company** Furniture	140
Greenwood Springs **Greenwood Slacks** Slacks	40
Aberdeen **Triangle, Limited** Pop-up Campers	50
Expansions	
Tupelo **Mid-South Packers, Inc.** Smoked and Fresh Meats	150
New Albany **Piper Industries** Metal Impact Extrusions	30

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	August 1979	July 1979	August 1978
Retail Sales	169.0	177.6	202.2
Electric Sales	205.0	201.3	199.6
Telephones in Service	217.2	216.2	207.4
Gasoline Gallonage	169.9	149.7	141.6
Loans of Savings & Loan Institutions	272.6	223.1	323.4

The Dean's Corner

The fact that America has reached a crossroads in its life seems apparent to any thinking person. The recent Camp David reappraisal of our societal needs by President Carter and numerous leaders in all walks of life is evidence of this awareness. There are so many things for which America should be truly grateful, and a few things which we need to change.

Perhaps the best way to inventory the good and not so good things characterizing our present state is to list national strengths and weaknesses, as the writer sees them. Let us begin with the strong points, although these will not necessarily be treated in order of importance.

Strengths

(1) **Momentum of Progress.** While there is some evidence that this momentum may have faltered somewhat as the result of a confused sense of direction, there is, nevertheless, a considerable momentum underway. To resume our progress it will not be necessary to begin **de novo**, as in the case of an undeveloped society, but some reorientation in our thinking will be required. As indicated in the last "Dean's Corner", a decision must soon be reached relative to national objectives, whether we wish to emphasize greater output or the so-called "quality of life" objectives. The latter involves such things as sharing the wealth, cleaning up the air and water still further and of protecting "snail darters" at the expense of millions of dollars of resources and reduced electric power production. Reference is, of course, made to the classic example of federal government bungling in the case of the Jellico, Tennessee dam. Essentially, the choice in national objectives narrows down to whether we wish more tangible goods or more intangibles.

(2) **Legacy of Technology**. Until quite recently no nation on earth could even approach the U.S. in terms of technological know-how and development. Starting essentially from "scratch" the technology in this nation became so advanced that in a few years of effort it was possible to place astronauts on the moon. In the space of one lifetime vehicle speeds were increased from 50 miles an hour (early autos and trains) to thousands of miles per hour (rockets). Equally spectacular achievements were experienced in many other areas, such as agriculture. And while technological development may have slowed down in recent years (judging by research and development expenditures), the technology which is our heritage is still awesome to comprehend. Given time we can solve most of our problems, such as energy shortages. Few other nations could truthfully claim this.

(3) **Capital Goods Inventory**. The key to high living standards is the availability of capital (production facilities). American superiority in this area has only recently been challenged and by only a small number of nations. With capital goods it is no longer necessary for men and women to serve as beasts of burden, but one person, with the help of our ingenious machines can do the work of many. This not only means more of everything for all but it also means freeing a large percentage of the work force to produce still more capital goods, to push even further the outer boundaries of technology, to spend more time in educational and cultural endeavors and in numerous other activities which lead to a better world. Our great wealth is in our vast store of capital goods, which unfortunately is being eroded, but in spite of this is still tremendous.

(4) **Relative Abundance of Resources**. Few nations, indeed, have been blessed with the plethora of gifts of nature that has been our lot. Vast stretches of fertile soil extend from horizon to horizon. Extensive stands of timber are to be found in many areas of the nation. Fuels, especially coal, are in great supply, and a sensible use of petroleum would allow an adequate supply for generations to come. Metals of many kinds are abundant, although our waste of these precious resources has been shameful. We could scale down our consumption of resources, and still have acceptable living standards.

(5) **Residual National Pride**. It may no longer be in vogue to "wave the flag", but there remains a deep pride in this nation on the part of all except a minority of misfits and cynics. It is true that this pride has been bruised in recent times by the demise of the dollar as the top international currency and by the loss of the last two wars. Most people, in spite of this, are really

being facetious when they state that a troop of boy scouts could "lick" the U. S. Army. Probably, the real explanation for the loss of these wars was that in the bizarre minds of foggy Washington to have won would have antagonized our enemies, and the use of modern weaponry would have meant killing more people. Oh, it is so easy to join the cynics! Let us fervently hope and pray that this nation will never become involved in open conflict again, but should it be mandated that we do so, let us pray that we can somehow summon the resolve to win.

(6) **Outstanding Educational System**. An ever increasing number of Americans of both sexes and all races are devoting a substantial percentage of their lives to obtaining an education. The fact that such a large percentage in their most productive years can be freed from the drudgery of producing consumer goods is largely because of two previously mentioned strong points, capital accumulation and advanced technology. The fact is, however, that the U. S. does, indeed, possess an enviable educational system, one that produces outstanding results. Most of the readers of this article (if there are any left at this point) would not be where they are today were it not for this system.

(7) **Democratic Nature of Society**. One of the most fortunate characteristics of American society is the broad base of inputs on matters of concern to all. In some nations solution to problems is dependent upon the capabilities of a few elite persons who have sufficient "clout" to make known their solutions. In America anyone who can read and write, and some who cannot, gratuitously contribute their ideas on anything from the energy shortage to birth control without fear of punishment. The collective wisdom of many, especially when combined with the relatively high level of educational achievement, can in some cases provide better solutions to problems than when only a handful is involved.

(8) **New Awareness of Societal Problems by President Carter**. This point of strength may not be assigned great value by many, but it seems to the writer that many of our current weaknesses are somehow associated with bad government. An awareness of this by the President could, with the support of Congress and the judiciary, eliminate to some degree these weak points, such as government created inflation and bureaucratic bungling. At any rate solutions to problems cannot be expected until an awareness of the problems exists.

(9) **High Level of Moral and Ethical Standards of a Large Segment of Society**. Most Americans, in the opinion of the writer, still possess a genuine sense of ethics and morals, in spite of the apparent slippage in recent times. One explanation for the widely publicized immorality now extant is that things which were formerly done only in a clandestine fashion are now openly treated. Also, the concept of morals, established to some extent by the Victorian age in which artificiality was the rule, has undergone considerable change. It has been reported that Queen Victoria covered the legs of her piano out of modesty. Such conduct has become passe. To some extent morals have been redefined in a similar vein. In terms of ethics, the vast credit system in this nation could not exist without a generally high level of ethical development. There are exceptions, of course, but by and large there is relatively little cheating in our society. Even much maligned politicians are in nearly all cases completely honest and even sincere; misguided perhaps, but they are not dishonest. They are simply victimized by well organized special interest groups, such as welfare recipients, labor unions and many, many others. The relatively high level of ethical and moral development which characterizes our society is very definitely a point of great strength.

However, there are some serious weaknesses which seem to have been rather rapidly developing.

Weaknesses

(1) **Economic Egalitarianism**. Egalitarianism traditionally refers to political and social equality, but the term is used here to describe the redistribution of income and wealth which is rapidly occurring. The basic philosophy of a free enterprise economic system is that individuals are left to pursue their objectives with full reward for their efforts. Of late, these rewards have been captured by the government in progressive income taxes and in turn millions have been rewarded for no effort through the dole and other misuses of tax receipts. This destroys incentives to work and to save, and our capital accumulation and productivity have suffered. This desire to make a lot of everyone better is admirable, but reward under our system must be based upon performance, not merely on need. Otherwise we will have abandoned that system which made this nation great, and we will have adopted communism. There is no such thing as pie in the sky, and yet there are millions who are being robbed to pamper nonproducers both in terms of dole recipients and the vast horde of drones in the federal

government performing either no real services or, perhaps worse still, services which are actually harmful to our economy.

(2) **Profligate Consumption of Resources**. As an example of this shameful waste, petroleum may be used as a classic case. The wise use of this resource would have permitted it to last hundreds of years, instead of only two lifetimes or so. No private automobile should ever have been sold which could not at least achieve, 30 miles to the gallon. The railroad system and other public transportation systems should never have been destroyed, necessitating **many times** over the usage of private automobiles which now is a fact of life. Wastes of other resources have been almost as bad. Our current "throw-away" system makes for inquitous wastes. Recently the writer's windshield cleaner pump ceased to function. The mechanic explained that a small diaphragm which was ruptured could have been purchased until recently for 50 cents, but that they were no longer available. The entire pump had to be replaced for $21. It has become cheaper to throw almost anything away, rather than to have it repaired. Formerly, there were repair shops where anything from an alarm clock to a toaster could be taken and repaired at a reasonable cost, but no longer is this true.

(3) **Poor Productivity**. This weakness has resulted primarily from an inappropriate level of capital accumulation and from the lack of an honest day's work for a day's pay (which tendency has in some industries become excessive).

(4) **Mushrooming Government Activities**. Enough has been said on this subject.

(5) **Loss of Faith and Confidence**. There seems to have truly occurred in America a deep malaise, as observed by President Carter. For the moment there does not appear to be the confidence in our political, economic and judicial systems which was formerly apparent. Let us hope that this can be corrected soon, and that a sense of direction can be reestablished which will lead us out of our present plight. It is certainly possible to accomplish this objective, with some reorientation in our thinking and with the proper kind of leadership.

(6) **Egocentricity**. This generation has been described by many writers as the "me" generation. Selfishness and self indulgence are certainly rampant. Little thought seems to be given to future generations in terms of their suffering from our egocentricities. The writer recalls when the welfare of future generations (our children and grandchildren) seemed to be uppermost in our thoughts and actions. This no longer appears to be true, and as a result we seem to have been consuming the seed corn which past generations have passed on to us. This lack of capital accumulation so frequently mentioned by the writer and wastes of all kinds are examples of this.

(7) **Illogical Ecological Objectives**. Certainly enough has been said about this subject. The writer for at least 30 years has advocated sound ecological practices (though not by that name), but currently it seems that the "kooks" have had an undue influence, even on court decisions.

Societal Needs

A review of the strengths and weaknesses characterizing the U. S. in the last quarter of the 20th century would indicate to the writer, at least, that the strengths far outweigh the weaknesses. Moreover, the weak points are those which can be corrected.

In order to get moving again in the right direction it would seem that certain needs must be met. Basically, these are the need for renewed faith in our system, and there is no compelling reason why this cannot be achieved. Greater pride, both national and pride in the individual's performance, needs to be developed. Let us hope that the apparent loss of this pride is only temporary. Lowered expectations need to be adopted. We must learn to drive smaller cars, use fewer resources and to re-adopt an attitude of thrift, both as individuals and in the public sector.

Perhaps, as a nation, we received too much, too soon, and like certain individuals who become overnight successes, the burden became too heavy to carry. Now is the time to take measure of our status, and to establish workable goals and objectives. Should we be willing to do this, America can regain its unchallenged eminence. The entire world would benefit from this, and happiness would again be the lot of Americans.

—Gaines M. Rogers, Dean

MEET THE FACULTY

Billy M. Bagwell

Associate Professor of Business Statistics and Data Processing

This month in the "Meet the Faculty" column Dr. Billy M. Bagwell is featured. Dr. Bagwell is Associate Professor of Business Statistics and Data Processing at Mississippi State University. He received his B.B.A., M.B.A. and Ph.D. from the University of Mississippi. Prior to entering the academic community, Dr. Bagwell worked for the former Gulf, Mobile and Ohio Railroad Company from 1953 through 1970.

Dr. Bagwell has taught at Arkansas State University in Jonesboro and East Texas State University in Commerce. His areas of teaching experience include the quantitative/data processing and management areas. Due to his industrial background, he is interested in the applications areas in business and has done extensive consulting work with municipalities and manufacturing firms.

Dr. Bagwell has published/presented approximately forty research papers. He is currently under contract with Richard D. Irwin, publishers to write a text in the business mathematics area. He is, also, preparing a study guide for the National Association of Purchasing Management for use in their certification program. His primary research interest is in techniques to optimize management decision activities.

Dr. Bagwell has been active in professional organizations and is currently serving his second consecutive term as President of the Southwest Region, American Institute for Decision Sciences. In addition he is serving on the twenty-four member Executive Board of the American Institute for Decision Sciences as well as several other professional committees.

Dr. Bagwell is married to the former Betty Bond of Wiggins, Mississippi and they have two children, a daughter, Rebecca, age 13, and a son, Shan, age 5.

Tourist Briefs

Magnolia Hotel
Biloxi, Mississippi

The Magnolia Hotel is the oldest hotel known to survive on the Mississippi Gulf Coast. Employing regional construction techniques, the structure is one of only a few remaining examples of a regional hotel type. The building and its history illustrate the close social and economic ties between the Mississippi Coast and New Orleans and document the historic importance of the tourist industry to the area.

The hotel was constructed in 1847 for a German immigrant, John Hohn, who had operated a coffee house or barroom in New Orleans. The contractor, Charles H. Kaufman of Biloxi, and Hohn were part of a large German population in Biloxi which, along with the French and other nationalities, has contributed to the international flavor still present in the area. Kaufman followed the "brick-between-posts" construction employed by the French on the Gulf Coast since the early eighteenth century. His design included the recessed two-story gallery to which all rooms opened, a design which was standard for contemporary hotels on the Gulf Coast.

After Hohn's death on April 4, 1848, his wife Elizabeth operated the hotel, accommodating the annual summer influx of guests who came primarily from New Orleans to more than double the population of Biloxi. By 1854, Biloxi was the most popular resort on the coast with an estimated 6,000 annual visitors. Increasing sectional pride before the Civil War was partly responsible for the growing patronage of Southern resorts. In the 1880s, the hotel began to receive winter guests from the North as the Mississippi Coast acquired its present status as a year-around resort. The hotel continued to operate in both seasons under the management of descendants of John Hohn until shortly after the Second World War when it closed. The structure was acquired as a part of urban renewal following the 1969 Hurricane Camille. The City of Biloxi purchased the hotel on March 16, 1972.

The Magnolia Hotel, as originally designed, was a two-and-one-half story, frame building measuring fifty-four feet on each side. The plastered exterior walls were recessed seven feet on all sides to form a surrounding two-story gallery with simple railing and posts. The principal elevation, including a gable end with kicked eaves, clapboard covering, and three openings, originally faced south onto the Gulf of Mexico. Among the five floor-length openings on each floor of this elevation, the central front door was distinguished by its greater width and its flanking paneled pilasters, sidelights, and rectangular transom. The rear (north) elevation matched that of the front but also included a pair of external stairs leading up from the central bay. The central bay of the five on each side elevation was left blank, but the others contained floor-length openings. Such openings on all elevations were originally closed by double-leaf batten doors.

On the interior, a hall ran through the center on both floors from front to back. It was flanked on the first floor by paired rooms and on the second floor by six rooms on each side, all with at least one opening to the gallery. The original chimney was located between the western rooms and was equipped with two fireplaces. The walls and ceilings on the first floor and the exterior walls on the second floor were finished with mud and plaster over brick fill or laths. The partition walls and the second floor were composed of beaded, vertical boards and the ceilings there were left with the beaded joists exposed.

Alterations to the original structure have included:

1848-1890: top floor changed to accommodate guests, including replacing the central opening in each gable with two doors opening to a balcony, sealing of the interior with matched horizontal boarding, adding two dormers to each slope of the roof, and adding an external boxed-in stair on the north gallery leading to the top floor;

second chimney added with openings to the hall and the eastern rooms on the first floor;

adjoining dining room and kitchen added, either incorporating or replacing the 1847 kitchen;

coffeehouse or barroom located on the beach destroyed;

1890-1940: exterior batten doors replaced by double-leaf doors with louvers over panels, louvers later replaced by panes of glass;

shed roof placed over each gable balcony; ceilings in some second-floor rooms boarded over;

1890-1900: boxed in stair replaced by interior stair leading from second-floor north gallery to top floor;

1920-1940: east stair on north gallery moved to the west gallery;

bathroom, lavatories, partition, and kitchen added on second floor;

1969: destruction by Hurricane Camille of adjoining dining room and kitchen and of parts of the hotel including all mantelpieces, back doorway, most of front doorway, some of the gallery posts and joists, and most of the first-floor flooring;

1972: hotel moved to higher ground on its original lot about 100 yards back from its original position and reoriented to face east, rather than south toward the beach.

The building is presently undergoing repair for use as a visitor information center. The repairs include replacement of missing beaded gallery joists with new unbeaded joists composed of two members each, replacement of the missing rear doorway with a somewhat similar, though later, doorway and replacement of the exterior first-floor plaster with wire-mesh-bonded concrete stucco which, to prevent cracking, has been applied thicker than the original, resulting, in the stucco surface being flush with the exterior wood trim, obscuring the molding on the top of the baseboards.

Worth Repeating

Once upon a time, there was a little red hen who scratched about the barnyard until she uncovered some grains of wheat. She called her neighbors and said, "If we plant this wheat, we shall have bread to eat. Who will help me plant it?"

"Not I," said the cow.

"Not I," said the duck.

"Not I," said the pig.

"Not I," said the goose.

"Then I will," said the little red hen, and she did. The wheat grew tall and ripened into golden grain.

"Who will help me reap my wheat?" asked the little red hen.

"Not I," said the duck.

"Out of my classification," said the pig.

"I'd lose my seniority," said the cow.

"I'd lose my unemployment compensation," said the goose.

"Then I will," said the little red hen, and she did.

At last, it came time to bake the bread. "Who will help me bake the bread?" asked the little red hen.

"That would be overtime for me," said the cow.

"I'd lose my welfare benefits," said the duck.

"I'm a dropout and never learned how," said the pig.

"If I'm to be the only helper, that's discrimination," said the goose.

"Then I will," said the little red hen. She baked five loaves and held them up for the neighbors to see.

They all wanted some—in fact, demanded a share. But the little red hen said, "No, I can eat the five loaves myself."

"Excess profits!" yelled the cow.

"Capitalist leech!" cried the duck.

"I demand equal rights!" shouted the goose.

The pig just grunted. They they hurriedly painted "unfair" picket signs and marched around, shouting obscenities.

The government agent came and said to the little red hen, "You must not be greedy."

"But I earned the bread," said the little red hen.

"Exactly," said the agent. "That is the wonderful free-enterprise system. Anyone in the barnyard can earn as much as he wants. But, under government regulations, the productive workers must divide their products with the idle."

And they lived happily ever after. But the little red hen's neighbors wondered why she never again baked bread.

Job Service Information

The State's unemployment rate dropped to 5.4 percent in August, a decrease of three-tenths percent compared to July's 5.7 percent jobless rate, according to Mississippi Employment Security Commission Executive Director Edgar C. Lloyd, Jr.

The 5.4 percent for the state was lower than the national rate of 5.9 for August. MESC figures showed 932,300 employed and 52,800 unemployed out of a civilian labor force of 985,100. The initial unemployed insurance claims totaled 9,546 for August.

The counties having the highest rate of unemployment were Jefferson with a rate of 12.2, Sharkey with a rate of 11.6, and Attala with a rate of 10.2.

Scott, Tishomingo, Itawamba and Rankin had the lowest rate of unemployed. Scott and Tishomingo had a rate of 3.2. Itawamba had an unemployment rate of 3.0 and Rankin had an unemployment rate of 2.5.

Sixteen counties showed an increase in the unemployment rate for August while five counties remained the same. Sixty-one counties had decreases in the unemployment rate for August.

Coming Soon

MISSISSIPPI STATISTICAL ABSTRACT 1979

This eleventh edition of the MISSISSIPPI STATISTICAL ABSTRACT 1979, contains information, like that in previous editions, representing the single most-varied compendium of statistics about Mississippi to be found anywhere. It is used by researchers, administrators, planners, historians, educators, politicians, and a host of others who maintain an interest in Mississippi and its areas. Copies of earlier editions have been distributed in virtually every state in the Union and in a number of foreign countries.

Sixteen Sections of **NEW** and **UPDATED** Information. . . .

339 Tables and 53 Figures

1. Recreation, Geography and Climate
2. Population
3. Health and Vital Statistics
4. Education
5. Labor Force, Employment and Earnings
6. Manufacturing and Trade
7. Transportation
8. Communications and Public Utilities
9. Banking, Finance and Insurance
10. Law Enforcement, Courts and Crimes
11. Mineral and Forest Products
12. Public Finance and Tax Revenue
13. Social Insurance and Welfare Service
14. Government and Politics
15. Construction and Housing
16. Agriculture

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STATE ECONOMIC INDICATORS

Indicator	August 1979	July 1979	August 1978	Per Cent Change One Month Ago	Per Cent Change One Year Ago
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	985,100	1,004,100	976,400	— 1.9	0.9
Non-Ag Employment	820,100	829,400	797,800	— 1.1	2.8
Mining	9,400	9,500	8,300	— 1.1	13.3
Contract Construction	49,500	49,900	45,500	— 0.8	8.8
Manufacturing	233,100	232,600	234,900	0.2	— 0.8
Transportation and Public Utilities	39,800	39,800	37,600	0.0	5.9
Wholesale and Retail Trade	164,500	164,400	157,300	0.1	4.6
Finance, Insurance and Real Estate	32,300	32,300	31,500	0.0	2.5
Service	116,500	118,800	114,200	— 1.9	2.0
Government	175,100	182,100	168,500	— 3.8	3.9
Unemployment Rate (Per Cent Labor Force)	5.4	5.8	8.0	——	——
Average Weekly Earnings	198.80	193.36	184.63	2.8	7.7
Average Hourly Earnings	4.97	4.92	4.57	1.0	8.8
Average Weekly Hours in Manufacturing	40.0	39.3	40.4	1.8	— 1.0
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,144	3,024	3,315	4.0	— 5.2
Gasoline delivered to Dealers (gals.)[3]	144,422	121,715	123,534	18.7	16.9
Dairy Production					
Milk (lbs.)[4]	69,000	70,000	71,000	— 1.4	— 2.8
Egg Production[4]	131,000	138,000	132,000	— 0.7	3.8
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	39,700	29,100	44,900	36.4	—11.6
Construction Loans	4,000	2,800	4,100	42.9	— 2.4
Bank Loans[6]					
Bank Deposits[6]					
Time Deposits[6]					
Demand Deposits[6]					
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[7]	2,202,902	2,127,500	2,188,562	3.5	0.7
Telephones in Service[8]	1,440,685	1,434,255	1,376,983	0.4	4.6
AGRICULTURE (000's)[9]					
Total Cash Receipts from Farm Marketings	110,342	134,384	116,300	—17.9	— 5.1
Cash Receipts from Marketing Livestock	89,843	102,313	80,300	—12.2	11.9
Cash Receipts from Marketing Crops	20,499	32,071	35,800	—36.1	— 42.7
RETAIL SALES TAX COLLECTIONS[10]	1,205,281	1,153,145	1,258,370	4.5	— 4.2

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for May, 1979

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Because of the lack of comparability, this series is being suspended.

[7] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[8] South Central Bell Telephone Company

[9] U.S. Department of Agriculture—Estimated for June

[10] Mississippi State Tax Commission

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Year Ago	Month Ago	Current Month August	Month Ago	Year Ago	Current Month August	Month Ago	Year Ago	Current Month August	Month Ago	Year Ago
Aberdeen	— 7.1	0.4	7,917	0.4	4.4	38,798	— 3.8	— 5.0	20,000	20,400	— —
Baldwyn	0.0	4.4	4,503	0.3	6.1	17,377	— 8.6	— 6.7	— —	— —	— —
Batesville	— —	— —	8,387	0.3	5.9	47,187	— 2.1	5.5	3,254,160	127,930	146,500
Bay Springs	— —	— —	— —	— —	— —	19,823	—17.8	—14.0	— —	— —	— —
Bay St. Louis	— —	— —	12,726	0.4	9.4	46,942	193.2	41.5	1,011,436	347,405	329,630
Belmont	32.5	24.8	2,174	1.3	8.2	8,125	—20.1	— 5.4	— —	— —	— —
Belzoni	— —	— —	4,689	0.6	4.4	24,821	7.3	4.0	17,237	37,500	— —
Biloxi	— —	— —	44,212	—0.3	0.7	250,416	19.3	1.6	— —	479,747	591,343
Brandon	— —	— —	11,903	0.8	10.5	27,605	— 0.8	— 6.0	402,366	726,000	1,308,394
Brookhaven	— —	— —	15,705	0.5	3.2	108,327	24.6	29.8	— —	— —	428,700
Brooksville	—10.5	32.7	1,304	0.0	4.4	3,421	— 2.9	—13.0	— —	— —	— —
Canton	— —	— —	10,425	0.7	4.6	59,004	1.9	— 4.7	— —	103,600	153,803
Carthage	— 3.8	0.4	7,154	0.4	6.5	32,076	— 1.6	7.0	183,500	153,000	47,300
Charleston	1.6	15.4	4,029	0.6	4.2	14,830	—10.3	7.8	— —	— —	— —
Clarksdale	0.3	— 1.4	20,325	0.1	4.4	103,673	2.0	— 2.2	465,210	135,040	414,102
Cleveland	— —	— —	13,674	1.2	3.2	79,618	— 1.9	— 3.1	— —	718,300	1,186,157
Collins	— 1.3	— 0.6	4,557	0.6	6.5	40,885	22.8	51.4	29,620	—0—	77,000
Columbia	— —	— —	15,218	0.3	5.4	68,509	0.2	3.9	— —	— —	— —
Columbus	4.4	— —	32,877	1.6	4.7	193,718	— 2.0	10.9	871,807	163,880	2,707,035
Corinth	2.0	— —	20,038	0.4	6.5	100,168	— 4.6	— 5.2	— —	275,377	161,477
Crystal Springs	— —	— —	5,673	0.2	4.9	24,004	— 2.4	— 5.3	70,000	68,639	76,200
Drew	—16.1	—38.6	2,638	0.8	3.5	11,419	13.9	4.1	4,000	43,000	28,000
Edwards	— —	— —	1,597	0.6	7.5	4,131	— 0.8	14.3	— —	— —	— —
Ellisville	1.0	— —	3,702	2.1	6.4	9,448	—28.1	—25.0	— —	— —	— —
Eupora	— 5.3	— 6.3	4,258	0.6	5.8	14,792	— 4.9	—22.3	— —	— —	— —
Fayette	— 8.1	12.3	3,177	0.3	4.8	8,262	3.6	—10.5	— —	— —	— —
Forest	3.5	20.9	4,937	0.6	6.1	49,329	9.9	15.5	— —	380,797	11,000
Greenville	— 7.2	22.5	35,849	0.1	4.7	235,995	8.2	— 2.2	— —	— —	— —
Greenwood	— —	— —	23,401	0.1	3.8	142,019	9.3	5.5	1,456,592	250,980	136,000
Grenada	— —	— 3.3	13,734	0.2	5.1	71,286	— 2.1	— 4.9	— —	— —	— —
Gulfport	0.2	8.5	59,229	0.2	4.5	242,684	7.1	4.6	960,371	618,213	973,371
Hattiesburg	— —	— —	56,896	1.1	4.1	300,041	6.3	2.9	1,465,324	942,876	1,074,795
Hernando	— 7.5	— 7.1	6,757	0.2	7.9	18,771	0.2	—13.0	93,550	533,780	43,000
Hollandale	— 3.4	— 3.0	3,209	0.3	4.6	12,533	—11.4	9.1	— —	19,724	144,364
Holly Springs	— 5.2	8.2	7,168	0.8	5.8	33,305	— 1.9	— 9.9	— —	135,500	51,000
Houston	— —	— —	5,477	0.2	5.7	26,339	— 0.3	—10.8	— —	152,036	242,000
Indianola	— 4.4	—11.9	7,477	—0.2	3.2	56,940	6.5	— 5.2	— —	— —	— —
Iuka	— —	— —	5,192	1.8	14.9	23,328	— 0.8	5.0	— —	— —	— —
Jackson	— —	12.5	218,272	0.2	3.6	1,401,543	— 4.9	0.4	12,178,284	6,805,047	7,881,116
Kosciusko	— —	— —	9,360	—0.1	2.7	48,323	1.4	— 0.8	— —	86,400	217,465
Laurel	8.7	1.6	32,082	0.5	4.4	215,073	10.3	— 8.3	690,501	891,929	643,997
Leland	2.4	11.1	4,897	0.8	3.1	18,337	— 7.0	— 4.5	74,000	124,500	50,330
Lexington	— —	— —	4,635	0.5	4.9	17,297	5.2	11.8	— —	— —	— —
Louisville	— 2.7	— 7.6	10,410	0.9	4.7	60,267	16.5	31.9	176,000	203,500	276,200
Lucedale	— —	— —	7,897	—0.1	6.1	28,130	—13.6	— 6.6	— —	252,305	27,000
Lumberton	— —	— —	2,802	—1.6	2.9	7,152	6.4	—28.0	— —	— —	— —
Macon	4.3	27.3	3,638	0.5	1.5	15,951	4.4	14.4	— —	— —	— —
Magee	— —	— —	5,163	—0.2	6.0	43,235	23.3	31.5	— —	— —	— —
Magnolia	— 0.4	—19.2	4,104	0.3	6.9	9,356	— 9.4	10.0	— —	20,000	67,000
Marks	—17.8	25.4	5,324	0.3	2.6	15,526	6.3	0.5	— —	— —	— —
McComb	— —	— —	19,139	0.3	5.4	102,764	8.8	8.0	478,481	411,300	495,099
Meadville	20.2	37.2	— —	— —	— —	4,282	—10.5	—27.8	—0—	—0—	—0—
Mendenhall	— —	— —	6,306	0.4	5.2	18,939	—15.5	— 7.8	1,425	65,615	65,000
Meridian	— —	— —	46,650	0.1	3.7	322,950	5.2	8.8	1,479,084	818,974	876,123
Monticello	— 6.3	2.9	4,563	0.0	5.3	16,366	— 2.5	— 6.4	— —	—0—	6,800
Morton	11.1	30.8	3,403	0.0	6.7	16,949	9.1	— 4.2	— —	— —	— —
Moss Point	— 0.2	16.5	16,371	—0.6	1.3	36,485	16.6	— 8.3	335,674	80,726	308,470
Natchez	13.1	— —	28,436	0.4	5.5	170,717	9.9	4.7	309,029	1,039,558	267,249
New Albany	— —	— —	10,859	0.5	— —	44,244	— 5.7	—20.4	— —	380,900	— —
Newton	—14.4	— 2.4	3,974	0.4	4.4	18,807	—17.8	—11.2	134,200	1,056,000	90,000
Ocean Springs	—16.5	— 1.1	15,369	0.2	3.7	62,833	19.9	— 1.2	448,549	285,818	597,424
Okolona	35.8	10.4	3,312	0.3	4.5	12,987	— 3.3	—22.2	— —	— —	— —
Oxford	— —	— —	20,606	3.0	3.5	67,515	2.9	— 7.0	355,520	107,375	145,432
Pascagoula	— —	— —	33,791	0.0	0.0	186,911	0.0	— 5.5	631,187	375,196	350,200
Pass Christian	— —	— —	5,401	—0.1	4.5	12,067	— 0.1	— 3.1	75,120	300,600	226,659
Philadelphia	— —	— —	11,173	—0.1	6.6	46,068	6.7	2.3	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Year Ago	Month Ago	Current Month August	Month Ago	Year Ago	Current Month August	Month Ago	Year Ago	Current Month August	Month Ago	Year Ago
Picayune	— —	— —	14,584	0.3	6.5	52,987	—2.2	— 5.2	214,316	330,008	963,553
Pontotoc	—17.7	0.3	9,130	0.1	6.4	31,968	— 8.6	—16.3	— —	— —	— —
Poplarville	— —	— —	4,209	0.3	5.5	13,098	— 8.1	—10.3	—0—	42,000	—0—
Port Gibson	— 6.6	32.4	5,495	0.8	9.8	14,015	6.8	31.4	— —	— —	— —
Prentiss	19.0	— —	4,245	0.0	— —	17,975	5.0	— 5.0	30,225	10,000	65,250
Quitman	7.0	33.8	4,717	0.6	4.6	22,482	— 8.4	—12.7	— —	— —	— —
Raymond	1.9	31.9	2,978	6.3	9.3	8,470	—13.5	—32.0	— —	— —	— —
Richton	— —	— —	1,903	0.2	7.6	8,269	—26.5	— 8.5	34,500	12,000	— —
Rosedale	1.0	— —	1,609	0.5	3.9	6,822	1.5	17.7	15,000	507,500	15,387
Ruleville	— —	— —	1,965	—0.1	3.4	10,084	—14.9	11.6	531,850	114,000	16,951
Sardis	— —	— —	3,416	0.8	4.2	16,770	5.8	49.9	— —	— —	— —
Senatobia	— 6.6	7.5	6,507	1.5	6.2	35,364	1.1	0.1	15,000	1,000	252,000
Shelby	—16.9	13.1	1,692	0.0	3.1	10,846	1.7	26.5	— —	— —	— —
Starkville	— —	— —	24,178	4.0	4.1	73,612	2.7	— 3.7	479,000	1,231,000	1,165,000
Summit	— —	— —	1,586	0.8	6.2	8,732	12.5	— 0.9	— —	— —	— —
Taylorsville	— 3.9	3.8	1,720	0.2	2.7	11,245	—23.5	—12.3	— —	— —	— —
Tchula	— —	— —	1,973	—0.6	4.5	5,456	50.1	8.6	— —	— —	— —
Tunica	— —	— —	4,151	0.6	3.7	17,492	1.1	2.6	— —	— —	— —
Tupelo	— —	— —	36,328	0.2	5.2	247,551	2.3	— 4.3	— —	— —	— —
Union	— 6.3	3.5	2,674	0.2	3.8	12,583	— 8.0	—17.5	— —	— —	— —
Utica	2.4	12.8	2,887	0.7	5.6	7,556	— 6.3	—13.6	— —	— —	— —
Vicksburg	— 0.4	8.2	37,363	0.2	3.3	171,184	4.0	2.0	438,100	423,002	177,209
Walnut Grove	— —	— —	969	—0.9	3.9	1,419	—15.5	—25.2	— —	— —	— —
Water Valley	1.0	54.6	3,906	0.0	6.8	18,710	— 4.9	12.9	— —	— —	— —
Waynesboro	— 9.4	—12.2	7,184	0.9	9.5	50,658	— 9.5	— 2.3	— —	— —	— —
West Point	— —	— —	11,872	0.5	6.2	43,745	— 5.8	— 4.1	375,000	233,000	319,000
Wiggins	— 4.4	1.7	5,970	0.6	6.1	17,681	—16.8	—41.0	91,000	100,900	30,000
Winona	0.0	1.3	4,872	0.8	3.1	29,639	— 1.5	4.7	811,574	363,600	164,176
Yazoo City	—11.4	26.7	11,933	0.5	4.4	61,068	2.5	6.6	— —	— —	— —

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	August 1979	July 1979	August 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	146,600	149,000	141,100	— 1.6	3.9
Unemployed Persons	5,000	5,400	8,100	— 7.4	—38.3
Per Cent of Labor Force	3.4	3.6	5.7	— —	— —
Employed Persons	141,600	143,600	133,000	— 1.4	6.5
Non-Ag Wage & Salaried	143,050	144,300	132,550	0.9	7.9
Manufacturing	19,050	18,950	18,750	0.5	1.6
TELEPHONES IN SERVICE	237,637	236,940	228,368	0.3	4.5
CITY SALES TAX COLLECTIONS	1,449,305	1,423,507	1,450,439	—4.9	—0.1

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	August 1979	July 1979	August 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	60,830	62,540	61,500	— 2.7	— 1.1
Unemployed Persons	3,560	3,750	4,840	— 5.1	—26.4
Per Cent of Labor Force	5.9	6.0	7.9	— —	— —
Employed Persons	57,270	58,790	56,660	— 3.1	1.1
Non-Ag Wage & Salaried	58,470	59,610	57,140	—19.3	2.3
Manufacturing	8,130	8,270	7,920	— 1.7	2.7
TELEPHONES IN SERVICE	108,842	108,880	105,757	0.0	2.9
CITY SALES TAX COLLECTIONS	505,167	448,613	490,993	12.6	2.9

Combined Market Value of Five Principal Crops by Counties

Source: The Mississippi Crop and Livestock Service. Computations made by the Division of Business Research, Mississippi State University. Per cent growth rate refers to the change over the preceding year. Principal crops include cotton, corn, soybeans, wheat and rice (000's).

County	1977	% of State	% Change	1978	% of State	% Change
Adams	5,732	0.63	2.95	6,902	0.67	20.4
Alcorn	6,817	0.75	−15.85	5,077	0.49	−25.5
Amite	1,695	0.19	−30.79	561	0.05	−66.9
Attala	4,765	0.53	10.87	5,233	0.51	9.82
Benton	14,850	0.53	−17.98	6,419	0.62	32.35
Bolivar	72,726	8.01	16.48	83,417	8.05	14.70
Calhoun	12,520	1.38	−11.40	9,246	0.89	−26.15
Carroll	8,193	0.90	− 4.50	9,234	0.89	12.71
Chickasaw	9,881	1.09	− 8.38	9,820	0.95	− 0.62
Choctaw	1,270	0.14	− 1.09	1,309	0.13	3.07
Claiborne	4,110	0.45	− 4.08	6,116	0.59	48.81
Clarke	522	0.06	−51.98	1,217	0.12	133.14
Clay	5,547	0.61	−35.81	8,320	0.80	49.99
Coahoma	13,824	1.52	−65.57	55,354	5.34	300.42
Copiah	2,516	0.28	−12.91	3,224	0.31	28.14
Covington	2,213	0.24	−23.85	2,401	0.23	8.50
DeSoto	14,284	1.57	−11.31	18,343	1.77	28.42
Forrest	1,262	0.14	−10.50	1,796	0.17	42.31
Franklin	1,147	0.13	−33.43	1,972	0.19	71.93
George	2,619	0.29	−20.05	4,129	0.40	57.66
Greene	680	0.07	−34.93	836	0.08	22.94
Grenada	6,914	0.76	−12.44	4,571	0.44	−33.89
Hancock	964	0.11	87.55	1,552	0.15	61.00
Harrison	640	0.07	−17.42	865	0.08	35.16
Hinds	11,378	1.25	− 8.85	15,057	1.45	32.33
Holmes	28,692	3.16	12.09	31,674	3.06	10.39
Humphreys	36,343	4.00	− 0.11	38,409	3.71	5.68
Issaquena	17,137	1.89	− 3.19	22,956	2.22	33.96
Itawamba	4,071	0.45	−28.02	3,859	0.37	5.21
Jackson	1,262	0.14	−13.56	1,449	0.14	14.82
Jasper	460	0.05	−11.71	649	0.06	41.09
Jefferson	3,239	0.36	− 7.77	5,513	0.53	70.21
Jeff Davis	1,263	0.14	−49.48	2,149	0.21	70.15
Jones	1,268	0.14	−16.80	1,470	0.14	15.93
Kemper	1,341	0.15	−43.32	1,806	0.17	34.68
Lafayette	3,883	0.43	13.74	4,835	0.47	24.52
Lamar	832	0.09	−27.27	1,673	0.16	101.08
Lauderdale	180	0.02	−60.09	341	0.03	89.44
Lawrence	1,340	0.15	−18.69	1,895	0.18	41.42
Leake	2,305	0.25	− 0.90	3,484	0.34	51.15
Lee	12,163	1.34	−15.93	12,292	1.19	1.06
LeFlore	56,784	6.26	16.71	57,378	5.54	1.05
Lincol[illegible]	1,25[illegible]	0.14	2.95	[illegible],306	0.[illegible]	4.[illegible]
Lowndes	8,729	0.96	− 8.51	11,003	1.06	26.05
Madison	16,849	1.86	5.35	10,343	1.00	−38.61
Marion	788	0.09	−30.39	1,586	0.15	101.27
Marshall	10,104	1.11	6.85	11,174	1.08	10.59
Monroe	14,332	1.58	−10.65	12,678	1.22	−11.54
Montgomery	4,343	0.48	2.26	4,502	0.43	3.66
Neshoba	593	0.07	−48.24	824	0.08	38.95
Newton	1,206	0.13	− 0.90	1,827	0.18	51.49
Noxubee	13,821	1.42	0.17	16,863	1.63	22.01
Oktibbeha	2,558	0.28	−24.63	2,751	0.27	7.54
Panola	24,870	2.74	− 0.24	26,150	2.52	5.15
Pearl River	3,236	0.36	4.22	4,595	0.44	42.00
Percy	1,399	0.15	10.33	2,679	0.26	91.49
Pike	1,066	0.12	−40.41	2,278	0.22	113.70
Pontotoc	9,085	1.00	−12.69	9,599	0.93	5.66
Prentiss	7,441	0.82	−21.94	7,335	0.71	1.42
Quitman	15,063	1.66	−49.75	37,925	3.66	151.78
Rankin	4,957	0.55	−15.21	6,283	0.61	26.75
Scott	1,922	0.21	−14.65	3,336	0.32	73.57
Sharkey	35,649	3.93	− 9.84	41,034	3.96	15.11
Simpson	1,614	0.18	−37.05	2,350	0.23	45.60
Smith	795	0.09	−44.75	1,557	0.15	95.85
Stone	601	0.07	−33.59	1,060	0.10	76.37
Sunflower	61,393	6.76	24.46	60,462	5.84	− 1.52
Tallahatchie	44,111	4.86	1.37	51,365	4.96	16.44
Tate	10,032	1.11	−13.94	12,734	1.23	26.93
Tippah	5,378	0.59	−11.97	5,859	0.57	8.94
Tishomingo	2,358	0.26	−13.44	2,045	0.20	−13.27
Tunica	33,769	3.72	− 4.65	45,989	4.44	36.19
Union	7,931	0.87	−21.30	7,778	0.75	− 1.93
Walthall	1,344	0.15	−39.05	2,139	0.21	59.15
Warren	7,476	0.82	−27.69	9,573	0.92	28.05
Washington	63,337	6.98	13.85	61,356	5.92	− 3.13
Wayne	445	0.05	−66.89	811	0.08	82.25
Webster	5,122	0.56	−11.64	5,939	0.57	15.95
Wilkinson	2,410	0.27	−24.66	3,283	3.17	36.22
Winston	1,532	0.17	−27.87	2,069	0.20	35.05
Yalobusha	5,806	0.64	2.04	6,237	0.60	7.42
Yazoo	47,787	5.27	−10.77	52,344	5.05	9.54
Other	8,143	0.90	175.38	103,536	9.99	108.2
State Total	90[illegible],589		− 0.[illegible]	1,036,15[illegible]		14.2

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Dr. Billy J. Eatherly

Billy Jack Eatherly is a Professor of Economics at Mississippi State University. He received his B.S. and M.A. from Mississippi State University and his Ph.D. from Southern Methodist University.

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James D. McComas, Ph.D.
President, Mississippi State University

Gaines M. Rogers, Ph.D.
Dean, College of Business and Industry

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Director, Division of Research
Editor, Mississippi Business Review
Editor, Mississippi Statistical Abstract
Professor of Marketing

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Associate Economist
and Associate Professor of Economics

Leo R. Cheatham, Ph.D.
Associate Economist and
Assistant Professor of Economics

J. Larry Hagler, D.B.A.
Editorial Advisor

Billy J. Eatherly, Ph.D.
Editorial Advisor

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Assistant Editor

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Peggy Roan
Secretary

Brenda C. Porter
Graduate Assistant

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Business and Economic Research

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Apocalpse Now?

by

Dr. Billy J. Eatherly

ABSTRACT

Will the troubled '30's repeat themselves in the still enigmatic '80's? Could be, but Billy J. Eatherly doubts it (which, he admits, is sort of like doubting that we'll have to fight World War II over again). What he doesn't doubt is that there'll be some trouble along the way and that most of us will hope for someone else to get us out of it.

APOCALYPSE NOW?

Middle age announces itself subtly to an academic. Always you're with youth, and it's easy to imagine that you gaze into a mirror. Then, one day, you're lecturing away about gasoline rationing back during "the war," and a svelte young sophisticate raises her hand to inquire innocently: "What war?" Later, you mention "the depression," and the class thinks you've absentmindedly lapsed over into psychology. After a few years of this, you do begin to get the message, however subtle, that there have been several wars since you got out of the habit of raising your hand before you spoke, and that a majority of the people surrounding you no longer remember Henry Fonda blown by an economic gale from Oklahoma to California in "The Grapes of Wrath."

So I was surprised this year to find myself answering a good many questions about the depression before I'd even mentioned it. When The New York Times arrived a week late, the explanation became immediately clear. We are beginning a decade of 50th anniversaries of the events collected together under the name of depression.

Memories, like good wine, tend to improve with the passage of time. All my parents wanted to do about the depression was forget it. Nowadays, the antics of the Waltons on their mountain make it all seem like warm family fun. And economics wizards assure us that if we aren't having a minidepression—"recession"—we ought to be, as a "corrective" for inflation.

So a certain amount of recalling of the troubled '30's would seem in order now. Actually, the '30's got an early start, in '29.

THE STOCK MARKET CRASH

The initial plunge of the stock market didn't take that long; so, by the time this is printed, the anniversaries of the market disaster will have been mostly passed. On Sept. 3, 1929, the Dow-Jones industrial average set a high—381.17—which was to stand as a record for 25 years. Although no one knew it yet, the great bull market was over. The chronicle of events of the following 60 days or so is the economic equivalent of war commentary.

Of course, investors did not immediately lose all confidence. Through September and into early October, there were good days with the bad. On Sept. 20, the recently launched Lehman Corporation, which had been offered at $104, sold at $136. As late as Oct. 15, Charles E. Mitchell's (head of National City Bank) announcement that "the markets generally are now in a healthy condition. . .values have a sound basis in the general prosperity of our country," as he set sail for New York from Europe fell on receptive ears. By this time, though, a generally steady downward drift had taken hold of the stock market.

On Saturday, Oct. 19, there were stories that Commerce Secretary Lamont was having difficulty raising $100,000 to pay the upkeep on the yacht **Corsair**, which J. P. Morgan had given to the government, and the market news showed that Lamont was not the only one having trouble keeping things up. By Sunday, headlines read STOCKS DRIVEN DOWN AS WAVE OF SELLING HITS MARKET. In the commentary on this, there were rumors that quite a few margin calls had gone out—investors using borrowed money were being asked to put up more cash of their own—and of "organized support" for the failing market sure to be soon forthcoming from the powerful few—the bankers.

"Organized support" was a magical phrase in those days, although now it's hard to see why.

Everybody knew that the powerful few could turn the market up at will when their own interest was at stake. Many had followed the stock ticker seeking the favored stock that the "big boys" had from time to time chosen to drive up higher and higher. The purpose didn't matter. Everybody knew that there was money to be made by following along. Those same powerful few could be relied upon to stop any great decline—in the public interest or in the interest of their own holdings—it didn't matter; they could do it if they chose. There is a good deal of reason to believe that the powerful few, such as they were, believed this themselves, although they abandoned this belief earlier than others.

Monday through Wednesday were very bad days for the market, with declining prices and huge volume. On Tuesday, Charles E. Mitchell arrived home, observing that "the decline had gone too far." Thursday, Oct. 24 came to be known in market history as Black Thursday. Buyers did not materialize for falling shares until after long vertical slides. To make matters worse, the stock ticker began to fall behind. Many a man on margin found himself sold out and broke before he even knew it. The bond tickers reported selected stocks at their current values, which were much worse than the ancient history appearing on the stock ticker. There was every reason to panic, and panic took over.

But not among the powerful few. At noon, in the offices of J. P. Morgan and Company, where the elder Morgan had decided that the panic of 1907 was to be stopped, the nation's most powerful bankers decided to pool their resources and lend the expected "organized support." At one-thirty, Richard Whitney, known as the floor trader for Morgan's, strode confidently to the post on the market floor where steel was traded and bid 205 for 10,000 shares. He personally collected some 200, left the order with the specialist, and walked on about the floor, placing orders for a score of other stocks. The bankers had at last taken a hand, and Black Thursday seemed, and in fact probably was, less black because of it.

On Friday and Saturday, volume continued high but prices slid little. Everyone agreed that a bad crash had hit the market, but felt that it had been handled well. There was much talk of bargains to be had. On Monday, Oct. 28, disaster struck and didn't let up. Volume was huge, the ticker ran behind, prices slid lower and lower. Charles E. Mitchell was seen entering Morgan's, and steel rallied briefly, but there was to be no "organized support" from the bankers this time. At four-thirty, a meeting convened, but the agenda seems to have been how the pool was to liquidate their promise of "organized support." It was clear enough that they could not contend with the vast desire to sell by the powerless many. The market had reasserted itself as beyond the control of any few, no matter how powerful. However, outside the inner circle, talk of "organized support" continued.

Tuesday, Oct. 29—Black Tuesday—was the worst day in market history. Great blocks of stocks were dumped on the market for whatever they would bring. Evidence appeared during the second week of the crash that it was no longer the powerless many being liquidated but the powerful few as well. The bankers met twice on the 29th to consider how to cope with the rumor sweeping the exchange that, far from supporting the market, the bankers' pool was actually selling stocks. A public announcement to the contrary was made that evening, but later intelligence revealed that A. H. Wiggins of Chase was personally short at the time for some millions, whatever the actions of the pool might have been. Certainly, "organized support" was over.

Incantation, organized and otherwise, was not. Optimistic statements abounded. Even John D. Rockefeller announced that he thought stocks were a bargain. (Repeated appeals for some similar statement from President Hoover produced no response.) And the incantation may have worked. Stocks rallied on Oct. 30 and 31. On Friday, Saturday, and Sunday, the market closed to catch up on paperwork—and sleep—and optimistic incantation reflected that it had closed on a rising market, at least.

On Monday, another sickening slump took hold. Rumors flew again that "organized support" was selling shares. A representative of the pool replied that he really didn't know; "organized support" was by now considerably less organized. The market's closing for the Tuesday, Nov. 5, election was followed by another very bad day. Bad news about the economy at large began to appear. Nothing really started up again for a long, long time. By the end of 1932, the Dow-Jones average stood at something like a tenth of its '29 high.

Who got hurt? Really, not so many. Of 75 million American adults, only a million and a half had brokerage accounts with a bare 600,000 trading on margin. Of course, there were some notables. Clarence Birdseye had put the $30 million he got from General Foods for his Birdseye Foods in the market and was ruined. William C. Durant, founder of mighty General Motors, ended up running a bowling alley in Flint, Mich.

Commodity prices and land prices, which had figured so prominantly in previous panics, were scarcely affected. In 1929, widespread failure of financial institutions was absent. So the market crash was an isolated and, compared to the depression itself, small event.

But why did it happen? The roots of a speculative crash are to be found in the preceding speculative boom. When people are convinced that stocks will rise, they will. Eventually, for whatever reason, people will decide that stocks will rise no further—indeed that they will fall—and they will. The crash of '29 was, then, no more remarkable than the great bull market which preceded it, and to find anything similar to that one must recall the Dutch tulip bulb mania of 1637, which followed the introduction of the tulip into Holland from Turkey. Until 1634, the bulb market was strictly professional, but the practice of buying bulbs with borrowed money became widespread, and, at the market's peak, the choicest varieties brought thousands. When the decline came, with it came hundreds of bankruptcies. The South Sea Bubble, at the height of which the South Sea Co. attempted a take-over of the Bank of England—roughly the equivalent of the Federal Reserve System—burst in 1720, leaving similar financial devastation.

THE DEPRESSION

By the end of '29, news was beginning to filter through that the "fundamentals," so highly praised in the incantation accompanying the crash, weren't really in such good shape. In fact, the cyclical peak which began the "great contraction," as economists term the depression era's earliest phase, occurred in August '29.

The agony of the depression lasted much longer than that of the crash and was much more widely shared. For much of the '80's, we shall move through 50th anniversaries of its awful toll, although most will receive no public notice. No banner headline announced when Jack Noblin lost her job at Woolworth's just as she was wearing through her last pair of shoes or when the Joad family lost its farm. It takes an artist properly to record individual tragedies of the masses, and the depression spawned at least as much art as it did politics and economics. An economist is pretty much stuck with the statistical record, which hides individuals in impersonal aggregates.

Between '29 and '33, money income of Americans declined 53 per cent. Prices fell, of course, and partly mitigated this decline, but even adjusted for price changes income fell by 36 per cent. By '33 real income was below its 1916 level, although population was 23 per cent higher. Per capita real income, by '33, stood at roughly its 1908 level. Thus, the depression wiped out the gains of two decades, not by destroying machines, technology, or men, as war does, but simply by idling them. During its worst year, '33, one person was unemployed for every three employed—nearly 13 million were without jobs. During the decade only once, in '37, did average unemployment drop below 8 million.

To find an economic catastrophe on the same scale in our history, we have to go back nearly a century more to 1839-43, when the battle over the Second Bank of the United States, the failure to renew its charter, the Specie Circular, the establishment of an Independent Treasury, its dissolution in the year following, so disrupted monetary affairs. In fact, the '29-'33 contraction may have still been worse. Like the earlier episode, however, the depression was marked throughout by monetary disturbances.

Of course, the stock market crash itself produced some monetary disturbance, mainly by shifting an attitude of faith in a new era of prosperity down to one of general pessimism. Partly as a result, there was a general shift away from stocks and toward bonds and to money itself by those whose wealth survived the crash. But the real troubles with money began with a banking crisis in Oct. '30. The number of banks suspending operations rose sharply, and, in the following month, a new crop of bank failures spurred attempts to convert bank deposits into currency—"runs."

Few now recall what a run on a bank really means. Long lines of depositors waiting to withdraw cash. Waiting in vain, because the cash to satisfy their demand isn't there. Implicit in any fractional reserve banking system is the banks' inability to accomplish wholesale conversion of deposits into cash immediately. Indeed, the very logic of the system is that they will not have to accomplish this conversion.

But many banks were asked to do so in late '30 and they couldn't and they failed, regardless of the "soundness" of their assets. Among them was the Bank of the United States, widely and erroneously believed to be somehow an official bank. Actually, it was merely another commercial bank—the largest ever to have failed.

Runs on banks tended to be contagious in those days, as one bank sought liquid reserves by cashing its deposits in another and depositors assailed still sound banks to beat the rush. In the earlier 1907 crisis, this vicious circle had been cut by restriction of deposit withdrawal. But now there was an outside savior for the banking system which was supposed to make such restriction unnecessary: the Federal Reserve System, created by law in 1913. And no such restriction was imposed in '30. The larger banks were not concerned. Supposedly they always had recourse to the "lender of last resort"—the Federal Reserve—and could borrow reserves to tide them over by "discounting" their loans.

And, after all, the banking crisis did seem to subside, without restriction, in early '31. But in March it struck again, intensified by failures of some large banks abroad. How did the "lender of last resort" react to the bank liquidations? By holding its credit outstanding roughly constant.

Foreign difficulties reached a climax in Sept. '31, when Britain abandoned the gold standard. Many foreign depositors feared the U.S. would soon follow and began to convert large amounts of dollar assets into gold. In those days, gold was a source of reserves to U.S. banks, and this external drain added to the drain into the public's currency holdings the banks were experiencing internally. The Federal Reserve responded strongly to the external drain by raising its charge for borrowed reserves—the "discount rate" —by a full percentage point. Between Aug. '31 and Jan. '32, 1,860 banks suspended operations. The Reserve reduced its total holding of U.S. securities, a move which drained more reserves out of banks, and, despite the increased cost of borrowing, discounts rose as the banks attempted to save themselves.

There were some attempts to help out both banks and their depositors. The Reconstruction Finance Corporation was established in Jan. '32, about the time the second wave of bank failures was over. A bill to provide federal insurance for depositors was introduced in May '32 but was never reported out of committee. The '32 campaign for the presidency pretty much summarizes the sentiment of the times: both sides promised fiscal orthodoxy and a balanced budget.

Things finally ground to a halt in '33. Runs on banks became so widespread that several states declared bank holidays in January and February. Fears of external drains were renewed, especially in the Federal Reserve, and pressure for a nationwide holiday mounted. Finally, President Roosevelt ordered the holiday on Mar. 6. Banks remained closed for a little over a week. If the point of the Federal Reserve had been to avoid suspension of payments by the banking system, it had certainly failed.

It had also failed to prevent shrinkage of the nation's money stock. Between Aug. '29 and Mar. '33, one third of that stock simply disappeared in the unavoidable arithmetic of deposit contraction, along with the economic gains of twenty years and the jobs of millions.

CAN IT HAPPEN AGAIN?

Of course it can. As far as the market crash goes, much of it already has. The market reached a record high on Jan. 11, 1973—1051.7 (Dow-Jones)—and fell to a low on Dec. 6, 1974—577.6. This represents a percentage decline only three points less (though over a longer period) than during the great crash. Although, as in '29, the most recent "crash" was associated with a recession—the longest and most severe since World War II—the recession ended, and the market did not continued a long downward drift as in the three years following the '29 crash. Nonetheless, anyone who had money in it knows that the stock market hasn't turned out to be the hedge against inflation it was once said to be, and many have turned elsewhere—to bonds, to gold, to real estate.

Perhaps some market reforms make an exact duplication of the '29 crash less likely nowadays. The mainr eform has been limitations placed on margin trading. In '29, with ten per cent down, a man could buy 10 shares of a stock selling for $100. If the stock doubled, he could use the $1,100 difference between his stock's value and his debt to buy $11,000 more stock, and so on. If his holdings began to fall, however, any loss reduced his own margin, and he would be called upon to furnish more cash and sold out if he couldn't. The Federal Reserve now strictly limits margin trading, prohibiting margin trading in some stocks entirely and setting a minimum of 50 per cent down on others. The idea is to make the base of any stock pyramid a bit broader and speculative movements more narrow. Whether this, or any number of Securities Exchange Commission Regulations have actually had a stabilizing influence upon the market is hard to say.

What about the larger event, the depression? Can it happen again? Again, I suppose that it could. After all, it did once, and events leading to a similar catastrophe are certainly easy to imagine. The Federal Reserve, or, perhaps, the Federal Deposit Insurance Corporation, could have a failure of intelligence or nerve or both. Or, as a popular account goes, the energy "crisis" could finally begin to live up to its name. Who knows?

Really, a more interesting question is will it happen—either another crash or a depression? On this question, a wise man gains humility from the predictions of '29. Witness those of Irving Fisher, perhaps the finest economist America ever produced.

Oct. 15, '29: "I expect to see the stock market higher than it is today within a few months."

Oct. 21, '29: The decline had represented only a "shaking out of the lunatic fringe." The professor explained that prices still had not caught up to increased values, partly because the public did not realize how much prohibition had raised the American worker's productivity and dependability.

Oct. 23, '29 (the eve of Black Tuesday): The professor was slightly less optimistic, emphasizing that "security values in most instances were not inflated." He was unshaken on the effects of prohibition.

Stocks continued to fall, almost without interruption, into '32. Fortunately, the professor left many other contributions to secure his long-run reputation.

The forecasting record on the depression is hardly more encouraging. The Harvard Economic Society was an association of solidly conservative professors, which had the good fortune to say that a recession was somewhat overdue in early '29. When the recession had not appeared by summer, however, they threw their good fortune away by admitting error, an admirable trait if not overdone. In the light of what we know of subsequent events, the Society certainly wouldn't have been begrudged a minor error of timing had it stopped there. But it continued to deny the recession for many months and issued generally optimistic forecasts into 1931. In the end, it was dissolved.

Certainly, however, humility should not go so far as cowardice. Let me say that I see nothing in the immediate future to indicate severe recession. There has been much talk lately of Federal Reserve tightness and renewed cooling of the economy, but I see little evidence of tightness and still feel that America's immediate problem is what it has been for some time: inflation.

The Federal Reserve did revise its operating procedures in early Oct., in what I feel is a hopeful direction. For 60 years or so, the Federal Reserve has targeted its policies toward affecting interest rates, taking high rates as evidence of tightness and low rates as evidence of ease. The difficulty is that it's hard to tell what a high rate is in these days of high and variable inflation rates. A nine per cent federal funds rate with inflation at seven per cent may be higher than a 13 per cent rate with inflation at 12 per cent. So the Federal Reserve has given up on interest rates and turned its attention to the growth of money, or so it says. Aside from whether it really will or not, there are many unanswered questions. The main one concerns exchange rate policies. The Federal Reserve has, for some time, attempted to "stabilize" the price of foreign currencies in terms of dollars. If it continues to do so, it could find the growth of bank reserves and money beyond its control. When foreigners want to sell dollars, the Federal Reserve will have to sell foreign currency to keep the dollar from falling. Such sales will reduce the growth of U.S. bank reserves and money. When foreigners want to buy dollars, the Federal Reserve will have to buy foreign currencies to keep the dollar from rising. These purchases will increase bank reserve and money growth. The Federal Reserve, by taking dollar stabilization too seriously, could lose much of the control over money growth it has gained by giving up on interest rates.

If the new operating procedures are carried through, they will give the Federal Reserve closer control over money. But this control can be used to inflate as well as deflate. From Oct. 1976 to Oct. 1978, the Federal Reserve was on an inflationary course, with money growth at something like 10 per cent per year. Then it tightened up to March 1979 and held money growth to something like three per cent. A recession seemed to me unavoidable at the beginning of this year, no matter what the Federal Reserve did. Then, they reversed themselves again in March 1979, and money began to grow at something like 12 per cent. An unlikely thing may have happened as a result of the latest reversal and a very short lag in its effect upon the economy: the recession may have been aborted. Will it be renewed? Everything depends, I think, on what the Federal Reserve does now. But this isn't always true, and I could be wrong about now.

What about the longer run? Any forecast beyond a year or so relies mainly on a guess about policy. I personally doubt that stringent attempts to control inflation will last very long and that inflation will continue at at least its current rates. Severe recession or depression in the long run? I simply don't know. An economy is a complex thing.

LEARNING FROM THE DEPRESSION

What can we learn from the troubled '30's? I think the main lesson is fairly simple: that there are fairly narrow limits on how much the powerful few, whoever they might be, can be expected to save us from ourselves.

In the '29 crash, hope centered on "organized support" from the bankers. Hadn't they successfully manipulated the market before? But, before the wave of mass selling, the powerful few proved powerless, and many of them eventually found themselves the object of investigation and even prosecution.

In the depression's aftermath, allegiance shifted, with the birth of the New Economics, to the Federal Treasury. According to the new ideas, depressed business would be more or less chronic in advanced capitalistic societies unless the Treasury threw its own spending into the gap left by lagging business investment. By the time of its heyday, the early '60's, an entire arsenal of fiscal policy measures—tax cuts, investment tax credits, and the like—were paraded about on display. But inflation rates crept upward and faith waned.

In the late '60's and early '70's, monetarism shifted hope back to the banks—at least to the Federal Reserve—and to monetary controls to smooth the rough spots of economic progress.

Then came the '74 recession with its rising inflation rate—stagflation—and talk began to turn to price controls, which had been briefly tried in 1971-72, public employment, and the like.

I should say that I feel there is some truth in all these points of view. The main error is in expecting too much from any of them. Monetarism's main exponent, Milton Friedman, has repeatedly warned of the extreme danger of expecting too much from the Federal Reserve and much of anything but trouble from direct controls. I couldn't agree more. In economic policy, as in life, the perfect is often the worst enemy of the good.

I chose the title to this piece carefully, shifting to the interrogatory the title of Francis Coppola's latest film. "Apocalypse Now" tells the story of a renegade colonel Kurtz, who has allowed himself to be elevated to a god-like eminence by his guerilla band and who is finally executed. The story of the film has been widely compared to Joseph Conrad's "Heart of Darkness," perhaps because Conrad's man-god has the same name, but it owes less to Conrad's story than to Sir James Frazer's "The Golden Bough." Frazier's classic work gives an account of ancient people's beliefs in magic, particularly of their disposition to elevate men to god-like status. (Coppola has acknowledged his debt to Frazier; see The New York Times, 10/21/79, p. D21.) Many primitive tribes felt it wise to select a man-god as the embodiment of the dark, superhuman forces of chance and to pay homage to those forces by honoring their human incarnation above all men. No amount of care would prevent the eventual aging and enfeeblement of the man-god however, and to prevent this affront to the superhuman, the man-god was finally executed and his soul transferred to a more vigorous successor.

How far have we come beyond the ancients in our understanding of the world in which we live? We suppose one powerful group or another to control the economy, the market, whatever reduces us to the level of belief. Belief in one group fails and is transferred to another, somehow supposed to be a more worthy vessel of our faith. I lose a good deal more sleep over this ancient tendency than I do over a renewal of the troubled '30's.

NEW AND EXPANDED INDUSTRY

Town	Firm	Product	No. of Employees
NEW			
Houston	**Anchor Lane, Inc.**	Furniture	30
Macon	**Golden Triangle Mfg. Co.**	Gloves	50
Mantachie	**Future Furniture Industries**	Furniture	40
Louisville	**Tabor's Wholesale Jewelry Co.**	Jewelry	10
Natchez	**Mid Continent Refining**	Oil Refinery	50
Brookhaven	**Brookhaven Brick**	Brick and Tile	75
EXPANDED			
Natchez	**Amoco Petroleum Additives**	Chemicals	30
Grenada	**Cellu Products**	Polyethylene foam pads	10
Vicksburg	**Foam Packaging Products**	Egg Cartons	6
Jackson	**G & O Mfg. Co.**	Replacement Radiator Cores	100

The Dean's Corner

The free enterprise system is dependent for its survival on the free entry of new business firms, as well as the demise of those which are inefficient. The freedom of access to the market place by new firms, most of which are small, at least in their beginning, preserves the vestiges of competition remaining in the oligopolistic structure characteristic of most industries in America today. And laissez-faire economics is absolutely dependent upon competition (and this includes price competition). It has been said of the enterprise system that supply and demand are its laws, and price is the administrator of these laws.

An inspiration to those whose faith in the free enterprise system has been shaken is the outstanding success of small businesses founded by men and women who have not heard that this cannot be done. There are many such successes every year in spite of such impediments as our confiscatory tax structure, an officious government, monolithic labor unions, and the existence of gigantic enterprises in nearly all fields, some almost as large as some states in terms of the numbers of people directly associated with them.

To encourage small business enterprises and to honor successful founders of these firms the Small Business Administration (a federal agency) honors the small business segment of our economy by naming the Small Businessperson of the Year for each state. Incidentally, the S.B.A. has performed yeomen service in the preservation of the enterprise system by helping small firms in both financing and in management assistance. The regional office in Jackson, under the directorship of Ardis Jones, has been particularly outstanding in its performance. The S.B.A. was initiated during President Eisenhower's administration. Incidentally, in accordance with a study by Dr. David Birch of M.I.T., small enterprises (under 20 employees) create two-thirds of all new jobs in the U.S.

As a long-time member of the S.B.A. Advisory Council, the writer finds genuine inspiration in observing the signal achievements of those small businesspersons considered by the Council for the above mentioned honor. It occurred to the writer that the readers of this column could, perhaps, share in this inspiration by hearing some of these success stories. An attempt will be made to briefly describe the achievements of the last three Small Businesspersons of the Year in this state, although it will not be possible to do justice to these outstanding entrepreneurs.

The current recipient of the award is Mr. Paul Nuckolls, the founder, owner and manager of Specialty Roll Products, Inc. of Meridian. Paul, after a number of years in sales work, started his own company about eight years ago with one machine and four employees. Incidentally, the "specialty rolls" appearing in the company name, refers to the nature of the product, paper rolls for business machines.

He started the business with an investment of $5,000. Unfortunately, for the first period of its operation most of the firm's output went to one buyer, and this one company failed after getting into arrears with its payments to Mr. Nuckolls' firm. This almost aborted his efforts at entrepreneurship, but he remained diligent and soon began to move forward with renewed vigor. Having learned the costly lesson of a monopsonistic market, he now has over 600 customers in 45 states and two foreign countries. No customer represents over 5% of sales. In an effort to provide quality service, orders received during the morning are shipped the same day.

Following the reorganization of his company in 1974, after the initial mishap, sales had increased by 500% by 1978, to approximately $2.5 million. Salaries increased to a quarter of a million dollars. Profit and pension plans for employees were established, and contributions to the plans in 1978 totaled over sixty thousand dollars. Total assets increased in the four year period from $100,000 to approximately $600,000, and net worth grew from a deficit of $7000 to almost a quarter of a million dollars. Paul Nuckolls is the epitomy of the American dream of success, and in spite of this remains the same hard working, unpretentious person he was at the beginning.

Who could not help but be inspired by this true story?

Or take the award recipient in 1978. His story was just as spectacular. Homer Formby, founder of Formby's Refinishing Products, Inc. of Olive Branch, received training in the antique restoration business from his father who was a master craftsman. His early business experience was in South Georgia and North Florida where he received invaluable experience in restoring old furniture and buildings, many dating from the plantation era. One of the major problems in refinishing old furniture is the damage to the patina (the coloring and mellowing process that age provides) incurred in removing old varnish or paint, particularly by the nonskilled. Over a period of several years Mr. Formby developed a chemical process to remove the old finish while preserving the patina. The new product was received with great enthusiasm by craftsmen, and was so easy to use that it was a blessing for the "do-it-yourselfer." He approached Rich's Department Store in Atlanta for advice on how to market the new product. The buyer for Rich's invited Homer to put on a display in the store, and in one day he sold the original $3000 inventory brought along. He soon began producing and marketing this and other related products, and he provided pamphlets which taught in simple fashion the refinishing process. By 1978 his business had grown to such magnitude that between 800,000 and 1,000,000 of these pamphlets were distributed **each month**.

While demonstrating the refinishing process in Goldsmith's Department Store in early 1973 in Memphis he decided to explore the Olive Branch area of northwestern Mississippi as a possible site for his plant to produce refinishing products. Early the next morning he visited Olive Branch, and by nine o'clock he purchased a plant facility financed by a S.B.A. loan. Soon he moved his business to Olive Branch, and the growth was phenomenal. By 1977 his sales volume was over $10,000,000, and he was employing 110 people. Meanwhile, Mr. Formby began to devote a sizeable amount of his time teaching in one way or another how to refinish furniture and other items as well as the proper care of fine wood products. Soon he had a nationwide TV program which was widely viewed. In order to have more time to devote to this type of activity, Homer sold his business to a large corporation for a very large sum. In 1970 he began to operate with a capitalization of only $33,000 (the price of a modest home at that time). His true story surely represents another example of how our free enterprise system can work, a system which has as its philosophical basis a full reward for achievement. In Homer's case his success benefited society (including the writer) by making it possible for the average person to find satisfaction and pleasure in refinishing old pieces of furniture.

Two years ago (1977), two partners in a small business firm were selected as the Small Businesspersons of the Year, Messers. Bobby Farris and Homer Rogers. In 1972 they started a small operation to make pads primarily for one furniture manufacturer in Tupelo, Mississippi. Initially an old building with only 1600 square feet was rented, and only one employee, along with Messers. Farris and Rogers, constituted the work force. In five years the firm had grown from this very modest beginning, serving only one Tupelo company, to one of the largest specialized producers of furniture pads. During this five years the company's employees grew to 23, and the list of customers grew to 100, operating in 32 states and Canada. Unfortunately, current information is not readily available to this writer relative to the continued progress of the firm, only the information used at the time of the award (1977).

The Small Businessperson Award winners for the past three years are merely examples of numerous other success stories in Mississippi and throughout the nation. It is, indeed, still possible to start a business with a very modest amount of capital, and with diligence make it grow into a sizeable operation. Of the three described, the largest initial capital investment was only the value of an average home, and two repesented less than the present price of a new automobile. The Small Business Administration has been involved in thousands of similar stories in this state alone, and the success of these small firms has provided good livelihoods for thousands of workers in the state.

Unfortunately, most people appear to seek the security associated with large and established firms. For the most part they will never enjoy the enthusiasm and sense of accomplishment associated with creating a new business. Perhaps, the most dominant characteristic of all the many successful entrepreneurs the writer has known (and there have been many) is **enthusiasm**. Most of the successful creators of new enterprises have simply radiated this unbridled enthusiasm. Their sense of accomplishment has seemed to be very great in all cases, apparently much the same as that felt by an artist or other creative persons who have succeeded in their endeavors.

Clearly, America is still the land of opportunity for those willing to venture and to strive.

—Gaines M. Rogers, Dean

Tourist Briefs

Hollywood Plantation

Benoit, Mississippi

Hollywood is a large deteriorating frame dwelling house situated on the west side of state route 448 one quarter-mile south of Benoit, Mississippi. The site has been known as Egypt Ridge since 1844, when a disastrous Delta flood failed to reach its elevated position. Based on traditional architectural principles as interpreted by local craftsmen, the design of Hollywood is best described as vernacular Greek Revival. Standing two-and-a-half stories high above a foundation of brick piers, the house is divided into five equal bays with the entrance placed on the center axis. A prostyle portico, with only two of its Corinthian columns remaining, is attached to the facade. Installed in 1955, these columns replaced the originals which were characterized by robustly turned, bell-shaped capitals, fluted shafts, and molded bases. To further promote the sophistication of the principle elevation, the framing of the facade and tympanum is covered with shiplap siding to contrast with the clapboarded secondary elevations. Of the remaining architectural features, the entrance frontispiece **in antis** is particularly noteworthy. Two fluted columns with provincial turned capitals and bases are paired with engaged piers of similar detail to support an architrave, frieze, and dentiled cornice. Beyond the frontispiece and paneled recess there remains only the outline of the entrance with its narrow transom and sidelights separated from the doorway by pilasters. Above the entrance is a second pilastered frontispiece and a paneled door, which was meant to give access to a balcony that was never installed. The facade fenestration is completed by the tall, glassless window openings, diminished on the second level, which flank the center bay. Each window architrave is capped by a simple molded cornice, an enrichment not found on the less ambitious secondary elevations. Here architectural treatment is limited to the four interior chimneys with their shallow reveals, the rear doorway which repeats the design of its counterpart on the facade with sidelights and a transom, and the entablature which is carried from the portico to follow the rake of the gabled ends. A double gallery, its doors communicating with the two back chambers and the upper passage, ran the full length of the rear elevation until its destruction by fire in the early years of this century. The kitchen, which was connected to the gallery by an open hyphen, has also disappeared.

As conceived by provincial craftsmen, the interior of Hollywood is designed with the same restrained ambition that is characteristic of the exterior. Interior spaces are arranged according to the traditional double-pile formula, with double parlors on the north and two large bedchambers on the north side of a central stairhall. Vandalism and decay have stripped the house of its major woodwork including the eight mantels and the stair balusters, banister, and newel. The scrolled step-ends and a single extant base of a turned baluster give evidence of the stair's original appearance. Window architraves, interior frontispieces and niche-surrounds survive as fine examples of the local joiner's skill. Each door opening off the center hall is treated with an eared architrave supporting a simple cornice. Special emphasis is given to the double parlors where doors and windows with paneled soffits are flanked by pilasters supporting a wide frieze and molded cornice. The woodwork of the secondary rooms, including the library and bed-chambers of the upper story, is limited to baseboards and window and door archtraves composed of a wide facia surrounded by a simple back-band typical of the 1850s.

Hollywood is the only structure associated with the locally prominent Burrus family that remains in Bolivar County, Mississippi. It was constructed by John C. Burrus (1818-1879), who was among the first to settle the county after its lands were removed from Indian control by the Treaty of Dancing Rabbit Creek in 1830. Although a native of Huntsville, Alabama, where he practiced law until 1842, Burrus had established a plantation in Bolivar County early enough to appear on that county's first tax roll, taken in 1836. According to the same records for 1840, Burrus's holdings consisted of 913 acres of land, valued at $3,652, and 34 slaves. Burrus continued his absentee ownership until 1842 when, according to family tradition, mistreatment of his slaves caused him to forsake his law career and settle permanently on his Bolivar plantation. Between 1842 and 1848, Burrus lived at Neblett Place and later at Wood Yard, where Mississippi River steamboats were supplied with wood from the dense forests once common in the Delta. In 1848, he moved his family five miles inland to Egypt Ridge, where he established a fourteen hundred acre plantation named "Hollywood." Until the present structure was completed in 1861, the family resided in a simple six-room log house which stood until the 1930s. Wholly ulititarian by nature, this crude structure was a great embarrassment to at least one family member, who anxiously awaited the completion of the new, more sophisticated dwelling. While a student at the University of Virginia in 1959, Burrus's son Charles wrote: "...I shall be very glad to get over to the new house. We will be much more comfortable and everything otherwise will be better arranged. The truth is I felt ashamed at living in the tumble (sic) down house we live in now. . .We can make the new place very beautiful by proper care. I shall plant every kind of flower there I can obtain for I am fully determined to have a pretty yard and garden" (Charles Burrus to Elizabeth Burrus, May 30, 1859, Burrus Papers). Although the name of the architect, or more likely the master builder, responsible for the designs of Hollywood remains unknown, contemporary family correspondence gives vague references to the actual building progress. On June 1, 1858, Burrus's wife Louisa wrote her daughter: "The workmen are here & have begun to make the window and door frames & things of that kind" (Louisa Burrus to Lizzy Burrus, Burrus Papers). A year and a half later the house was almost complete when she wrote: "They are burning the brick & the chimneys will soon be finished. They are finishing off upstairs—as all below is done. The parlor & dining rooms are very pretty" (Louisa Burrus to Flossy Burrus,November 23, 1859, Burrus Papers). Because "the painter (was) so slow in coming," the house remained unfinished in May of the following year (Louisa Burrus to Flossy and Elizabeth Burrus, May 20,1860, Burrus Papers). After almost three years of building, Hollywood was finally completed in early 1861, although it stood without the originally proposed balcony.

From the time of his removal to Bolivar County, Burrus was active in local political affairs. In 1847, he was elected president of the seventh Board of Police, forerunner of the County Board of Supervisors, and was subsequently reelected to that body in 1853, 1855, and 1862. Although he did not serve in the military during the Civil War, Burrus aided the Confederate cause by allowing General Peter Burwell Starke to camp his men at Hollywood and, according to family tradition, by harboring General Jubal Early during his surreptitious escape to Mexico after the surrender at Appomatox. Because of its inland location, Burrus's plantation was not damaged by the Federal gunboats which habitually shelled the structures lining the Mississippi River. It is partially for this reason that the Burrus residence remains the only significant antebellum "mansion-type" plantation house extant in Bolivar County.

The political and economic climate of the Reconstruction period afforded Burrus little opportunity for public service. He was elected Justice of the

Peace in 1865 but only two years later placed last in a four-man contest for sheriff, having received only five votes. With his death in 1879, Burrus's estate passed to his only surviving son, John Crawford Burrus, Jr. (1847-1928), who served in the Civil War with the 9th Texas Cavalry until his capture in December, 1864. Upon his release in March, 1865, Burrus had returned to Hollywood and joined his father in the effort to save the plantation from financial ruin. In the closing years of the nineteenth century, Burrus became involved in local politics, serving on the Bolivar County Board of Supervisors from 1890 to 1896, after which he became a Justice of the Peace (1896-1900). In 1904, Burrus was elected to one term (1904-1908) in the state house of representatives, followed by a term (1908-1912) in the state senate.

Two years after his retirement from public service, John C. Burrus, Jr., moved into the nearby residence of his only surviving child, Mrs. Margaret Burrus Batty. Ceasing to serve as a Burrus dwelling, Hollywood was rented to tenants and soon fell into a state of disrepair. The first plea for the preservation of Hollywood came in 1933, a mere five years after Burrus' death. Describing the deteriorating condition of the house, a local historian wrote: "Much of the back part has fallen away but the main part of the house remains intact and it is not yet too late to save it for posterity. . .unless something is done now to stay the decay this lone survivor of Bolivar County's early mansions also will soon pass into the ream (sic) of memories". The first attempted preservation of Hollywood came in 1955, when Warner Brothers filmed a large portion of Tennessee William's **Baby Doll** at Hollywood plantation. Instead of paying for the use of the property, Director Elia Kazan agreed to repair the house. These "improvements" were wholly superficial and, in some respects, destructive in nature. The film crews attached a purposely ruinous one-story kitchen to the northwest corner of the house, replaced the original columns with ones of more "correct" Corinthian design, and painted the exterior white. The notoriety given the Burrus house by the film attracted curious visitors, many of whom vandalized the interior by stripping off its woodwork and marring the plaster walls with graffiti. To reverse the rapid decay of Hollywood, the heirs of John Crawford Burrus, Jr., donated the property to the Bolivar County Historical Society in 1975.

* * *

Civil War Shorts

FIRST TELEGRAPH IN WAR. During the siege of Vicksburg, members of the Union Signal Corps strung many miles of telegraph wire connecting Major Ulysses S. Grant's GHQ with his corps commanders' headquarters.

When Major General William T. Sherman was placed in charge of the Federal force sent to prevent General Joseph E. Johnston's Confederates from crossing the Big Black River, communications personnel operated in the wake of the bluecoats. The telegraph was employed to keep Sherman in close contact with developments in the Vicksburg area. This was the first time in the history of warfare that telegraph was used in the field to keep the army commander in touch with his principal subordinates.

REBS APPLY "SCORCHED EARTH." One of the few times the Confederacy carried on a "scorched earth" policy during the Civil War, was at the time of Major General William T. Sherman's advance on Jackson in July, 1863.

It was unusually hot and in order to slow the Union advance General Joseph E. Johnston's Confederate soldiers during the course of their retreat to Jackson, drained all the cisterns and filled in all the wells between the Big Black and Clinton.

To render the water in the ponds unfit for drinking, livestock was driven into them and shot.

SOUTHERNERS WIN SKIRMISH. During the Siege of Jackson (July 10-17, 1863) the Federals made only one full-scale assault on the defending Confederate force.

On July 12, in the Bailey Hill sector (to the east of present day Battlefield Park) Colonel Issac C. Pugh's brigade, 1,000 strong, launched an attack against the Confederate rifle pits held by Major General John C. Breckinridge's division.

Within forty-minutes, Pugh's brigade was hurled back, having lost over half the men engaged. This smashing success had cost the Southerners only seven casualties.

Source: **Let's Talk Mississippi**, Mississippi Economic Council, 1974.

MEET THE FACULTY

Dr. Leo R. Cheatham

Division of Business Research

Leo Cheatham is one half of the Drs. Cheatham team on the staff of the School of Business and Industry at Mississippi State University. Dr. Carole Cheatham is a Professor in the School of Accountancy. Leo is a staff member of the Division of Business Research and has primary responsibilities in various areas of economic research with one fourth of work time assigned to teaching.

Since joining the staff at the School of Business and Industry in 1974, the variety of courses taught by Dr. Cheatham has probably covered a broader spectrum of subjects than those taught by any other faculty members. Job title does not reveal the full range of courses taught. In addition to economics, Dr. Cheatham has taught courses in accounting, business policies, and finance, representing four different departmental areas. Present teaching duties are in the Department of Finance. Education qualifications for teaching in these areas include a B.B.A. and an M.B.A. with emphasis in economics and finance, plus a Ph.D. in business finance.

Contract research occupies most of the time allotted to research activities. All phases from the search for and acquisition of contracts to the completion of projects are performed by Dr. Cheatham. Contract research is essential to the operation of the Division of Business REsearch since only a portion of the operating budget is supplied by the University. At least one project has been acquired from the Mississippi Water Resources Research Institute in each of the years since his employment by the Division.

Funded research conducted for the Institute has consisted primarily of studies of economic impacts of various types of governmental regulations. Three separate studies have been conducted in connection with impacts of the National Flood Insurance Program. The most recent one completed in October

1979, focused on the impact on new construction and property value effects of floodplain ordinances in coastal Mississippi communities. Another regulation impact study conducted for the Institute concerned the impacts of the Safe Drinking Water Act on rural water systems in the State. Typical of contract research for private organizations was a riverfront industrial park and port terminal feasibility study conducted for the Monroe County Port Commission.

A number of articles have been published and papers presented in connection with research projects. Several articles have appeared in the MISSISSIPPI BUSINESS REVIEW. Findings of the flood insurance studies have been presented to a variety of audiences ranging from the Mississippi Water Resources Conference to the national meeting of the American University Bureaus of Economic Research. Follow up consultation services are also being provided on many of the projects. Completion reports on each of the Water Resources Research Institute projects are published and receive national distribution.

As a faculty employee of the Division of Business Research, Dr. Cheatham provides research support services to other faculty and students by aiding in the search for economic data and providing advice on research topics and methodologies.

Spare time is consumed by various types of automotive mechanical activities. Besides operating Cheatham's Shadetree Garage, which is a non-profit enterprise, Leo is the chief mechanic for a local church which has a fleet of five buses. Experience in this area also qualifies him as the chief automobile repair consultant for the School of Business faculty.

* * *

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	September 1979	August 1979	September 1978
Retail Sales	169.4	169.0	162.0
Electric Sales	197.4	205.0	217.3
Telephones in Service	218.3	217.2	209.4
Gasoline Gallonage	143.1	169.9	164.9
Loans of Savings & Loan Institutions	239.1	272.6	363.0

Richer is Poorer

Americans now find themselves in the paradoxical position of being both richer and poorer than they were at the beginning of this decade. The median income of the prototypical U.S. family (one earner, employed full-time, year-round, with a non-working spouse and two children) has increased by nearly 66 percent in the last seven years. At the same time, its after-tax purchasing power has declined by more than 8 percent since 1972, according to Tax Foundation economists.

From 1972 to 1979, the median family's money income climbed from $11,152 to an estimated $18,467. After direct Federal taxes, both income and social security, and inflation take their bite, however, the family's purchasing power, measured in 1969 dollars, has dropped $700—from $8,500 to $7,800—leaving the family richer on paper but poorer at the supermarket.

During this period, Federal individual income taxes jumped 82 percent, from $985 to $1,789, while social security taxes soared 142 percent, from $468 in 1972 to $1,132, in 1979. Total direct Federal taxes have more than doubled in seven years. While after-tax incomes were rising 60 percent, prices went up 75 percent. The result is an 8 percent decline in actual purchasing power.

For the ten-year period from 1969 to 1979, the rise in before-tax median family income barely managed to keep pace with the 99 percent climb in prices. Mounting taxes, however, caused an actual drop of 2 percent ($147 in 1969 dollars).

This "richer-is-poorer" situation does not even take into account the added burden of state and local individual income taxes. Such levies vary widely, but on the whole, they have grown more rapidly than Federal income taxes and have a significant impact on family budgets. Total state and local individual income taxes are four times as high in 1979 as they were a decade ago and have increased relative to the Federal income tax burden. In 1969, states and localities took about 10.5 percent of what the Federal government claimed. By 1979, they were taking 16.3 percent. Given the assault of taxes and inflation on the typical worker's paycheck, it is possible to be richer and poorer at the same time.

Source: Tax Foundation, Inc.

Construction and Housing Indicators

NEW CONSTRUCTION

Period	Total new construction expenditures	Private: Total	Private: Residential: Total [1]	Private: Residential: New housing units	Private: Commercial and industrial	Private: Other	Federal, State, and local	Construction contracts [2]: Total value index (1967=100)	Construction contracts [2]: Commercial and industrial floor space (millions of square feet)
	Billions of dollars								
1971	110.0	80.1	43.3	35.1	17.0	19.8	29.9	145.4	727
1972	124.1	93.9	54.3	44.9	18.1	21.5	30.2	165.3	854
1973	137.9	105.4	59.7	50.1	21.7	24.0	32.5	179.5	1,010
1974	138.5	100.2	50.4	40.6	23.8	25.9	38.3	169.7	840
1975	134.5	93.7	46.5	34.4	20.8	26.4	40.9	167.9	555
1976	148.8	110.5	60.5	47.3	19.9	30.0	38.3	199.4	592
1977	172.6	134.7	81.0	65.7	22.5	31.3	37.8	252.2	738
	Seasonally adjusted annual rates							*Seasonally adjusted*	*Seasonally adjusted annual rates*
1977: Sept	177.8	138.3	83.0	67.6	24.2	31.2	39.4	279	813
Oct	176.7	139.2	84.2	69.3	24.1	30.9	37.4	244	757
Nov	178.1	140.6	85.2	70.7	24.3	31.1	37.4	258	847
Dec	179.0	142.3	87.4	72.8	22.8	32.1	36.8	299	864
1978: Jan	171.4	134.9	79.4	65.0	22.4	33.2	36.4	283	996
Feb	177.6	141.9	85.3	70.9	22.8	33.8	35.7	266	814
Mar	185.4	147.7	88.1	72.5	25.4	34.1	37.7	254	863
Apr	195.3	153.7	92.4	74.4	26.4	34.9	41.5	279	921
May	201.6	156.5	94.5	75.1	27.3	34.6	45.1	332	1,061
June	205.8	160.6	94.9	76.6	30.6	35.1	45.2	249	999
July	208.3	159.9	94.0	77.7	30.6	35.3	48.4	286	898
Aug p	206.5	158.1	92.6	77.2	30.9	34.7	48.4	289	951
Sept p	207.0	159.3	92.4	76.7	31.9	34.9	47.8	300	1,037
Oct p	------	------	------	------	------	------	------	319	1,015

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[1] Includes nonhousekeeping residential construction and additions and alterations, not shown separately.

[2] F. W. Dodge series. Relates to 50 States beginning 1969 for value index and beginning 1971 for floor space.

NOTE.—New construction expenditures data prior to 1973 not comparable with later data. Data revised beginning January 1978.

Sources: Department of Commerce (Bureau of the Census) and McGraw-Hill Information Systems Company, F. W. Dodge Division.

NEW PRIVATE HOUSING AND VACANCY RATES

[Thousands of units or homes, except as noted]

Period	New private housing units: Units started, by type of structure: Total	Units started: 1 unit	Units started: 2–4 units	Units started: 5 or more units	Units authorized	Units completed	New private homes: Homes sold	New private homes: Homes for sale at end of period [1]	Vacancy rate for rental housing units (percent) [2]
1970	1,433.6	812.9	84.8	535.9	1,351.5	1,418.4	485	220	5.3
1971	2,052.2	1,151.0	120.3	780.9	1,924.6	1,706.1	656	287	5.4
1972	2,356.6	1,309.2	141.3	906.2	2,218.9	2,003.9	718	409	5.6
1973	2,045.3	1,132.0	118.3	795.0	1,819.5	2,100.5	634	418	5.8
1974	1,337.7	888.1	68.1	381.6	1,074.4	1,728.5	519	346	6.2
1975	1,160.4	892.2	64.0	204.3	939.2	1,317.2	549	313	6.0
1976	1,537.5	1,162.4	85.9	289.2	1,296.2	1,377.2	646	354	5.6
1977	1,987.1	1,450.9	121.7	414.4	1,690.0	1,657.1	819	403	5.2
	Seasonally adjusted annual rates								
1977: Oct	2,139	1,532	127	480	1,781	1,665	870	398	------
Nov	2,096	1,544	134	418	1,822	1,769	819	401	------
Dec	2,203	1,574	153	476	1,778	1,641	857	403	5.1
1978: Jan	1,548	1,156	101	291	1,526	1,759	813	405	------
Feb	1,569	1,103	79	387	1,534	1,696	774	404	------
Mar	2,047	1,429	126	492	1,647	1,821	793	404	5.0
Apr	2,165	1,492	142	531	1,740	1,943	827	410	------
May	2,054	1,478	89	487	1,597	1,854	846	412	------
June	2,124	1,441	148	535	1,821	1,890	831	418	5.1
July p	2,119	1,453	135	531	1,632	1,943	794	418	------
Aug p	2,025	1,440	139	446	1,563	1,970	779	420	------
Sept p	2,081	1,462	112	507	1,731	1,929	775	422	5.0
Oct p	2,080	1,447	145	488	1,681	------	------	------	------

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[1] Seasonally adjusted.

[2] Quarterly data entered in last month of quarter.

Source: Department of Commerce, Bureau of the Census.

STATE ECONOMIC INDICATORS

Indicator	September 1979	August 1979	September 1978	Per Cent Change One Month Ago	Per Cent Change One Year Ago
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	994,800	985,100	975,500	1.0	2.0
Non-Ag Employment	834,100	820,100	802,400	1.7	4.0
Mining	9,500	9,400	8,200	1.1	15.9
Contract Construction	49,500	49,500	43,600	0.0	13.5
Manufacturing	233,300	233,100	235,600	0.1	— 1.0
Transportation and Public Utilities	39,900	39,800	37,700	0.3	5.8
Wholesale and Retail Trade	164,400	164,500	157,400	— 0.1	4.4
Finance, Insurance and Real Estate	32,200	32,300	31,400	— 0.3	2.5
Service	119,700	116,500	115,300	2.7	3.8
Government	185,600	175,100	173,100	6.0	7.2
Unemployment Rate (Per Cent Labor Force)	5.3	5.4	7.1	——	——
Average Weekly Earnings	186.50	198.80	185.72	— 6.2	0.4
Average Hourly Earnings	4.96	4.97	4.62	0.2	7.4
Average Weekly Hours in Manufacturing	40.0	39.3	40.4	1.8	— 1.0
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,094	3,144	3,473	— 1.6	—10.9
Gasoline delivered to Dealers (gals.)[3]	119,533	144,422	135,747	—17.2	—11.9
Dairy Production					
Milk (lbs.)[4]	63,000	69,000	65,000	— 8.7	— 3.1
Egg Production[4]	132,000	137,000	130,000	— 3.6	1.5
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	32,600	39,700	43,000	—17.9	— 24.2
Construction Loans	4,700	4,000	3,400	17.5	38.2
Bank Loans[6]					
Bank Deposits[6]					
Time Deposits[6]					
Demand Deposits[6]					
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[7]	1,936,492	2,202,902	2,042,572	—12.1	— 5.2
Telephones in Service[8]	1,448,023	1,440,685	1,389,237	0.5	4.2
AGRICULTURE (000's)[9]					
Total Cash Receipts from Farm Marketings	248,682	110,342	77,527	125.4	220.8
Cash Receipts from Marketing Livestock	89,881	89,843	60,521	0.0	48.5
Cash Receipts from Marketing Crops	158,801	20,499	17,006	674.7	833.8
RETAIL SALES TAX COLLECTIONS[10]	1,163,467	1,205,281	1,014,567	— 3.5	14.7

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[1] Mississippi Employment Security Commission
[2] State Oil and Gas Board for June
[3] Mississippi Motor Vehicle Comptroller
[4] Mississippi Crop and Livestock Reporting Service July
[5] Federal Home Loan Bank of Little Rock
[6] Because of the lack of comparability, this series is being suspended.
[7] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority
[8] South Central Bell Telephone Company
[9] U.S. Department of Agriculture—Estimated for **July**
[10] Mississippi State Tax Commission

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Year Ago	Month Ago	Current Month September	Month Ago	Year Ago	Current Month September	Month Ago	Year Ago	Current Month September	Month Ago	Year Ago
Aberdeen	5.2	8.1	7,953	0.5	5.0	39,777	2.5	8.7	82,590	20,000	289,950
Baldwyn	− 3.1	8.4	4,539	0.8	5.9	18,371	5.7	20.1	——	——	——
Batesville	−12.3	− 9.9	8,401	0.2	5.9	46,691	− 1.1	42.8	62,500	3,254,160	251,900
Bay Springs	——	——	——	——	——	22,837	15.2	46.8	——	——	——
Bay St. Louis	——	——	12,833	0.8	9.4	16,684	−64.5	−32.1	255,400	1,011,436	341,400
Belmont	− 7.5	15.4	2,182	0.4	7.8	7,945	− 2.2	6.2	——	——	——
Belzoni	——	——	4,702	0.3	5.4	21,485	−13.4	18.4	26,800	17,237	321,272
Biloxi	——	——	44,127	−0.2	0.4	224,347	−10.4	21.3	——	——	675,010
Brandon	——	——	11,100	− 6.7	2.2	26,457	− 4.2	25.9	467,044	402,366	491,366
Brookhaven	——	20.2	15,713	0.1	2.9	97,777	− 9.7	33.5	——	——	293,650
Brooksville	7.4	41.9	1,309	0.4	6.3	3,474	0.0	21.9	——	——	——
Canton	——	——	10,475	0.5	5.0	61,025	3.4	23.1	592,430	99,803	398,893
Carthage	− 7.9	− 3.5	7,195	0.6	6.7	35,633	11.1	30.0	112,800	183,500	125,000
Charleston	——	——	4,016	0.3	4.0	16,384	10.5	18.0	——	——	——
Clarksdale	− 8.3	− 0.9	20,385	0.3	4.4	103,474	− 0.2	20.5	——	465,210	283,927
Cleveland	——	——	13,830	1.1	2.9	87,065	9.4	19.3	——	——	645,185
Collins	− 6.1	5.9	4.548	−0.2	6.8	34,002	−16.8	83.8	−0−	29,620	202,800
Columbia	——	——	15,242	0.2	5.3	66,798	− 2.5	27.2	——	66,500	——
Columbus	−10.2	42.5	33,203	1.0	4.7	183,178	− 5.4	23.2	267,256	871,807	612,655
Corinth	−14.2	——	20,122	0.4	6.6	96,918	− 3.2	15.2	78,396	——	——
Crystal Springs	——	——	5,733	1.1	5.6	24,990	4.1	19.2	1,169,000	70,000	101,200
Drew	8.4	−27.2	2,637	−0.0	2.9	9,359	−18.0	−13.1	——	4,000	11,000
Edwards	——	——	1,520	−4.8	1.9	——	——	——	——	——	——
Ellisville	——	——	3,744	1.1	7.2	3,796	− 8.1	0.8	——	——	——
Eupora	−12.4	− 9.0	4,284	0.6	5.6	15,683	6.0	13.2	——	——	——
Fayette	0.8	29.1	3,209	1.0	6.4	7,295	−11.7	− 0.2	——	——	——
Forest	−12.6	13.4	4,960	0.5	6.4	50,671	2.7	48.9	598,000	188,600	139,850
Greenville	− 6.5	14.5	35,976	0.4	4.9	236,235	0.1	17.9	——	——	——
Greenwood	——	——	23,436	0.1	4.0	136,997	− 3.5	14.3	227,450	1,456,592	54,000
Grenada	39.6	——	13,723	−0.1	4.6	74,439	4.4	20.8	——	——	109,325
Gulfport	− 9.4	− 3.5	59,511	0.5	4.8	230,155	− 5.2	26.3	——	960,371	——
Hattiesburg	1.5	——	57,827	1.6	4.3	306,377	2.1	20.2	2,028,000	1,465,324	753,869
Hernando	− 7.8	7.3	6,789	0.5	7.6	22,156	18.0	52.0	133,500	93,550	268,556
Hollandale	− 9.7	5.9	3,247	1.2	5.8	10,239	−18.3	− 3.4	2,500	2,000	110,813
Holly Springs	−13.4	1.8	7,194	0.4	5.8	34,808	4.5	15.4	63,500	——	——
Houston	——	12.1	5,496	0.3	5.8	23,417	−11.1	2.1	1,715,250	135,700	161,700
Indianola	− 7.9	17.0	7,505	0.4	3.4	53,879	− 5.4	20.7	——	——	——
Iuka	——	——	5,220	0.5	13.0	26,348	12.9	40.6	——	——	——
Jackson	−15.9	11.7	220,160	0.9	4.1	1,217,195	−13.2	− 3.6	8,384,013	12,178,284	6,102,779
Kosciusko	——	7.6	9,401	0.4	3.4	47,501	− 1.7	10.9	32,800	512,000	122,000
Laurel	−13.3	9.9	33,226	0.4	4.5	214,574	− 0.2	17.3	380,917	690,501	568,099
Leland	——	——	4,897	0.0	3.0	16,245	−11.4	6.1	25,799	74,000	134,620
Lexington	——	——	4,668	0.7	5.1	17,359	0.4	25.8	——	——	——
Louisville	− 8.3	− 4.2	10,440	0.3	4.8	46,699	−22.5	31.1	410,000	176,000	46,000
Lucedale	——	——	7,853	0.6	5.0	25,631	− 8.9	24.0	212.000	33,500	62,000
Lumberton	——	——	2,818	0.6	3.2	6,560	− 8.3	11.3	——	——	——
Macon	——	——	3,646	0.2	1.8	13,463	−15.6	29.7	——	——	——
Magee	——	——	5,173	0.2	5.1	37,788	−12.6	20.3	——	——	——
Magnolia	−11.8	−23.9	4,136	0.8	7.2	10,007	7.0	13.7	——	——	6,500
Marks	−11.5	− 4.5	5,359	0.7	3.9	14,787	− 4.8	10.9	——	——	——
McComb	——	0.6	19,273	0.7	5.5	123,816	20.5	52.6	261,674	478,481	75,450
Meadville	−19.6	44.0	——	——	——	5,243	22.4	1.8	−0−	−0−	12,712
Mendenhall	——	——	6,346	0.6	5.1	21,772	15.0	19.4	——	1,425	35,500
Meridian	——	——	47,010	0.8	4.1	330,014	2.2	24.8	535,726	1,479,084	847,727
Monticello	——	——	4,597	0.7	5.9	16,401	0.2	14.9	607,810	−0−	68,500
Morton	−15.4	20.7	3,414	0.3	6.7	27,291	61.0	79.5	−0−	−0−	−0−
Moss Point	−23.1	−11.5	16,251	−0.7	0.6	32,657	−10.5	− 3.7	——	335,674	187,015
Natchez	− 9.6	19.0	28,548	0.4	5.4	176,713	3.5	30.9	779,136	309,029	261,830
Newton	——	——	3,970	−0.1	4.4	24,284	29.1	52.0	117,968	134,200	116,700
Ocean Springs	− 6.3	0.7	15,393	0.2	3.4	51,992	−17.4	− 6.3	179,637	448,549	543,506
Okolona	−11.6	− 6.6	3,337	0.8	4.9	13,528	4.2	29.3	——	——	——
Oxford	——	3.5	21,088	2.3	3.6	72,649	− 7.2	23.8	323,602	355,520	280,500
Pascagoula	——	−14.1	33,655	−0.4	0.2	169,478	− 9.3	7.1	1,628,470	631,187	410,946
Pass Christian	——	——	5,390	−0.2	4.0	10,732	−11.1	14.3	126,500	75,120	160,019
Philadelphia	——	——	11,189	0.1	6.3	41,734	− 9.4	17.4	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Year Ago	Month Ago	Current Month September	Month Ago	Year Ago	Current Month September	Month Ago	Year Ago	Current Month September	Month Ago	Year Ago
Picayune	——	——	14,660	0.5	6.9	69,292	10.0	35.0	356,712	214,316	329,773
Pontotoc	— 4.3	9.6	9,166	0.4	6.4	——	——	——	——	——	——
Poplarville	——	——	4,024	—0.1	4.5	10,963	—16.3	3.6	47,000	—0—	26,500
Port Gibson	— 9.3	33.7	5,553	1.1	10.7	12,144	—13.3	13.7	——	——	——
Prentiss	—27.0	13.2	4,237	—0.3	——	17,402	— 3.2	25.4	80,000	30,225	5,500
Quitman	— 9.8	39.4	4,744	0.6	4.8	20,863	— 7.2	10.3	——	——	——
Raymond	— 4.4	36.8	3,088	3.7	8.9	9,298	9.8	38.2	——	——	——
Richton	——	——	1,901	—0.1	6.3	8,339	0.8	2.5	——	34,500	114,500
Rosedale	——	——	1,618	0.6	3.9	6,271	— 8.1	5.9	——	15,000	62,350
Ruleville	— 4.9	3.2	1,969	0.2	3.2	10,101	0.2	22.6	27,178	531,850	83,175
Sardis	——	——	3,421	0.2	3.9	16,003	— 4.6	31.5	—0—	51,000	—0—
Senatobia	— 3.6	6.9	6,589	1.3	6.0	37,632	6.4	28.2	100,000	15,000	15,000
Shelby	—14.3	— 0.6	1,686	—0.3	3.1	11,032	1.7	3.8	——	——	——
Starkville	——	——	24,488	1.3	4.2	78,232	6.3	15.2	223,000	479,000	1,012,000
Summit	——	——	1,598	0.8	6.5	8,341	— 4.5	17.3	——	——	——
Taylorsville	0.8	4.0	1,730	0.6	3.2	11,039	— 1.8	13.1	——	——	——
Tchula	——	——	1,988	0.8	0.1	4,623	—15.3	52.5	——	——	——
Tunica	——	——	4,166	0.4	3.8	16,845	3.7	30.6	——	——	——
Tupelo	—11.5	12.9	36,591	0.7	5.5	262,780	6.2	16.3	——	——	——
Union	—10.8	0.7	2,695	0.8	4.4	16,804	33.5	44.2	——	——	——
Utica	——	——	2,907	0.7	5.6	8,420	11.4	23.5	——	——	——
Vicksburg	— 5.5	17.0	37,602	0.6	3.6	188,979	10.4	37.4	2,728,236	438,100	876,234
Walnut Grove	——	——	982	1.3	4.7	1,697	19.6	17.7	——	——	——
Water Valley	—13.8	37.8	3,924	0.5	6.5	20,722	10.8	35.9	——	——	——
Waynesboro	—14.3	—13.0	7,198	0.2	8.9	63,415	25.2	58.9	40,000	1,138,856	341,000
West Point	——	9.1	11,907	0.3	6.0	44,503	1.7	20.2	1,376,000	375,000	356,818
Wiggins	—13.4	— 1.2	5,980	0.2	6.4	20,138	13.9	15.0	——	91,000	301,000
Winona	— 7.7	23.5	4,902	0.6	3.5	30,027	1.3	26.3	36,500	811,574	42,000
Yazoo City	— 2.6	4.2	11,977	0.4	4.4	61,751	1.1	23.7	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	September 1979	August 1979	September 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	147,400	146,600	139,100	0.5	6.0
Unemployed Persons	5,800	5,000	7,700	16.0	—24.7
Per Cent of Labor Force	3.9	3.4	5.5	——	——
Employed Persons	141,600	141,600	131,400	0.0	0.8
Non-Ag Wage & Salaried	146,100	143,050	134,500	2.1	8.9
Manufacturing	18,950	19,050	18,850	— 0.5	0.5
TELEPHONES IN SERVICE	238,775	237,637	229,359	0.5	4.1
CITY SALES TAX COLLECTIONS	1,265,166	1,449,305	1,300,612	—12.7	— 2.7

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	September 1979	August 1979	August 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	58,950	60,830	60,840	— 3.1	— 3.1
Unemployed Persons	3,540	3,560	4,700	— 0.6	—24.7
Per Cent of Labor Force	6.0	5.9	7.7	——	——
Employed Persons	55,410	57,270	56,140	— 3.2	— 1.3
Non-Ag Wage & Salaried	57,730	58,470	58,050	— 1.3	— 0.6
Manufacturing	7,730	8,130	7,990	— 4.9	— 3.3
TELEPHONES IN SERVICE	109,028	108,842	109,862	0.2	0.8
CITY SALES TAX COLLECTIONS	465,234	505,167	376,490	— 7.9	23.6

Combined Market Value of Five Principal Crops by Counties

Source: The Mississippi Crop and Livestock Service. Computations made by the Division of Business Research, Mississippi State University. Per cent growth rate refers to the change over the preceding year. Principal crops include cotton, corn, soybeans, wheat and rice (000's).

County	1977	% of State	% Change	1978	% of State	% Change
Adams	264,526	2.19	15.58	291,623	1.91	10.24
Alcorn	156,568	1.30	9.80	186,344	1.22	19.02
Amite	22,272	0.18	8.27	24,927	0.16	11.92
Attala	85,477	0.71	9.96	90,002	0.59	5.29
Benton	10,725	0.09	10.23	11,578	0.08	7.95
Bolivar	176,314	1.46	4.32	198,089	1.30	12.35
Calhoun	47,215	0.39	5.97	51,484	0.34	9.04
Carroll	16,278	0.13	—8.90	20,121	0.13	23.61
Chickasaw	61,061	0.51	9.34	70,172	0.46	14.92
Choctaw	19,023	0.16	2.60	18,782	0.12	—1.27
Claiborne	131,592	1.09	52.78	166,464	1.09	26.50
Clarke	41,653	0.35	4.14	52,153	0.34	25.21
Clay	89,122	0.74	7.56	96,951	0.63	8.78
Coahoma	176,187	1.46	5.49	197,258	1.29	11.96
Copiah	81,248	0.67	6.72	92,273	0.60	13.57
Covington	79,354	0.66	11.40	91,904	0.60	15.82
DeSoto	122,002	1.01	17.09	145,270	0.95	19.07
Forrest	457,703	3.79	9.20	539,972	3.53	17.97
Franklin	21,546	0.18	21.92	22,470	0.15	4.29
George	42,422	0.35	3.80	46,830	0.31	10.39
Greene	17,639	0.15	11.75	18,599	0.12	5.44
Grenada	116,909	0.97	8.83	131,492	0.86	12.47
Hancock	64,315	0.53	9.73	85,861	0.56	33.50
Harrison	763,070	6.33	11.33	882,130	5.77	15.60
Hinds	2,138,545	17.73	6.23	2,526,663	16.54	18.15
Holmes	64,357	0.53	9.87	68,914	0.45	7.08
Humphreys	47,665	0.40	7.18	53,144	0.35	11.49
Issaquena	4,194	0.03	—7.93	6,875	0.05	63.92
Itawamba	43,321	0.36	10.34	55,201	0.36	27.42
Jackson	524,741	4.35	13.41	550,922	3.61	4.99
Jasper	47,264	0.39	3.72	53,139	0.35	12.43
Jefferson	16,310	0.14	12.79	18,050	0.12	10.67
Jeff Davis	36,758	0.30	19.00	39,706	0.26	8.02
Jones	393,741	3.26	13.83	454,684	2.98	15.48
Kemper	16,413	0.14	20.04	21,443	0.14	30.65
Lafayette	103,082	0.85	8.51	108,993	0.71	5.73
Lamar	52,237	0.43	8.94	90,407	0.59	73.07
Lauderdale	526,443	4.36	7.60	558,839	3.66	6.15
Lawrence	29,705	0.25	1.61	35,424	0.23	19.25
Leake	55,595	0.46	17.20	62,161	0.41	11.81
Lee	553,505	4.59	10.97	612,508	4.01	10.66
LeFlor[illegible]	246,301	2.04	6.66	26[illegible],491	1.7[illegible]	6.17
Linc[illegible]	143,0[illegible]	1.19	[illegible]4.35	[illegible]8,043	[illegible]	10.4[illegible]
Lowndes	330,796	2.74	16.69	366,620	2.40	10.83
Madison	151,235	1.25	12.58	179,640	1.18	18.78
Marion	99,324	0.82	10.36	121,752	0.80	22.58
Marshall	66,375	0.55	4.27	73,346	0.48	10.50
Monroe	138,945	1.15	13.58	172,567	1.13	24.20
Montgomery	47,308	0.39	1.66	51,309	0.34	8.46
Neshoba	76,231	0.63	14.65	88,828	0.58	16.52
Newton	62,072	0.51	4.09	64,577	0.42	4.04
Noxubee	40,013	0.33	5.76	47,903	0.31	19.72
Oktibbeha	114,625	0.95	10.40	141,997	0.93	23.88
Panola	110,793	0.92	—0.29	120,643	0.79	8.89
Pearl River	97,265	0.81	10.02	115,505	0.76	18.75
Percy	21,758	0.18	23.48	32,387	0.21	48.85
Pike	183,171	1.52	4.37	210,482	1.38	14.91
Pontotoc	54,709	0.45	18.59	63,130	0.41	15.39
Prentiss	81,372	0.67	10.10	92,629	0.61	13.83
Quitman	38,154	0.32	5.82	43,952	0.29	15.20
Rankin	286,056	2.59	20.41	370,381	2.42	29.48
Scott	92,474	0.77	10.18	101,378	0.66	9.63
Sharkey	30,210	0.25	17.38	34,444	0.23	14.02
Simpson	82,082	0.68	11.72	88,725	0.58	8.09
Smith	35,186	0.29	4.23	36,777	0.24	4.52
Stone	30,018	0.25	14.85	35,282	0.23	17.54
Sunflower	211,832	1.76	1.29	238,804	1.56	12.73
Tallahatchie	46,170	0.38	—0.30	50,034	0.33	8.37
Tate	58,446	0.48	8.45	68,977	0.45	18.02
Tippah	76,978	0.64	10.82	94,939	0.62	23.33
Tishomingo	53,833	0.45	3.44	92,597	0.61	72.01
Tunica	33,675	0.28	3.84	35,975	0.24	6.83
Union	82,996	0.69	5.02	85,322	0.56	2.80
Walthall	39,180	0.32	1.91	44,805	0.29	14.36
Warren	282,078	2.34	2.95	310,217	2.03	9.98
Washington	375,846	3.12	7.98	425,805	2.79	13.29
Wayne	71,979	0.60	15.61	85,401	0.56	18.65
Webster	32,875	0.27	12.31	36,216	0.24	10.16
Wilkinson	35,745	0.30	12.53	38,441	0.25	7.54
Winston	68,473	0.57	6.81	77,984	0.51	13.89
Yalobusha	37,107	0.31	15.71	40,268	0.26	8.52
Yazoo	179,266	1.49	7.92	183,164	1.20	2.17
Other	1,153,[illegible]78	[illegible]	32.41	[illegible]448,499	[illegible].48	25.57
[illegible] Total	12,[illegible],705	[illegible]	11.1[illegible]	[illegible]5,280,0[illegible]	[illegible]	[illegible].60

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Dr. Robert W. Kopprasch is Assistant Professor of Finance at The American University. He received his B.S., M.S. and Ph.D. from Rensselaer Polytechnic Institute, School of Management, Troy, NY. Dr. Kopprasch is also a professional photographer.

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The Impact of Option Exercises: A Closer Look

By Dr. Robert W. Kopprasch

A call option is an option to buy 100 shares of a specified stock at a specified price, and this option may be exercised at any time, prior to expiration, by the holder. The stock that the option allows the investor to buy is sometimes called the underlying security; the price at which the underlying security may be purchased is known as the striking price.

The advantages of call options make them very appealing to speculators. If an investor expects a stock to increase enough to more than offset the price paid (known as the premium) to acquire the call, purchasing the call will provide a greater rate of return than purchasing the stock. In addition, the premium is the only capital at risk. Regardless of how far the price of the underlying stock might decline, the call buyer cannot lose more than the premium.

On the other side of this transaction is the call "writer" or seller who creates the option contract and is obligated to the call buyer. If the stock rises, the call writer must sell the stock to the call buyer at the striking price. Obviously, the writer can exprience serious losses if the stock rises rapidly, forcing him to purchase the stock at the high market price and resell it to the call exerciser at the striking price. To protect themselves from this type of risk, many call sellers buy the stock (if they don't hold it already) at the time they write the option. Thus they "cover" this upside risk, and their investment strategy is known as covered call writing. If the option is exercised, they can simply deliver the shares they hold, and they earn the premium.

On the other hand, if a writer is bearish on the stock or merely more daring, he may write calls without covering himself. Such a strategy is known as uncovered or "naked" call writing.

With exchange traded options, the type dealt with in the following article, a writer can extricate himself from the contractual obligation he has assumed by purchasing a call with the same striking price and expiration as the one he sold, and his position would be negated. While the details of the mechanism that permits this is beyond the scope of this introduction, it should be noted that if a writer does not engage in this sort of "closing-purchase" on an option that would be profitable to exercise, the option will be exercised against him, and he will have to deliver the shares (at the striking price).

The call buyer need not exercise his exchange traded option to retrieve its value: it may be sold on an option exchange. If the option has some time left before expiration, it might be purchased by another speculator (hoping for leveraged profits with limited losses). If it is shortly before expiration, however, the new purchaser will more likely be a writer engaging in a "closing-purchase" transaction (to negate his obligation), or a market maker engaging in arbitrage if the option is selling below its intrinsic value. The market maker would immediately exercise the option, and this is one source of exercise. Another occurs when the call holder exercises the option himself. The following article deals with the impact these exercises may have on the underlying stock price.

Since the inception of listed option trading by the Chicago Board Options Exchange, there have been charges that options trading has affected the equity market in various ways. One particular aspect of this controversy related to the effect on stock price caused by option related transactions (namely exercises) in the period immediately preceding expiration of the options. Although it was originally anticipated that few exercises would occur because listed options could be sold for value prior to expiration, such exercises occur as a result of option rage or because investors buy "in the money" options to effect "deferred purchases" of the stock.

The impact that such exercises can have on the underlying stock is a function of three factors: a) the number of exercises relative to volume in the underlying stock; b) whether the exerciser immediately sells the called stock (as in option arbitrage) or retains it (as in deferred purchasing), and c) whether the exercise notice is delivered to a "covered" call writer or a "naked" writer. For example, if a deferred purchaser delivers an exercise notice (via the Options Clearing Corporation) to a covered option writer, there are no visible market transactions, and presumably, no impact on market price. If, however, the exerciser is a deferred purchaser[1] and the option writer is naked, the only transaction seen by the market would be the purchase of the stock by the option writer to deliver it. If the exercises in a particular stock contained a large proportion of this kind of exercise, there might be upward pressure on the stock. If on the other hand, the exerciser were an option arbitrageur and the exercise notice was delivered to a covered writer, the only transaction visible to the market would be the sale of the underlying stock. An abundance of this type of exercise might cause a downward pressure on the stock price. These transactions and their related effects are summarized in Figure I.

The CBOE has directed or performed several research efforts (1), (2) and (6) to determine whether the equity market has been influenced by the pressure of option trading. Areas covered included volume, volatility, price changes during up and down markets, impact of exercises, etc. Regarding the impact of exercises, these published studies indicate that there is no significant relationship between exercises and stock price performance. Nevertheless, it remains the opinion of market practitioners that option exercises do have an impact on price, although supporters feel that options are being unjustly criticized (7)

> "Worth remembering is that whatever happens at the expiration of a major series (January, April, July, and October); the blame goes to options. Whether the move is up, down, or sideways. . . . .
>
> Last year, the story was the same. Expiration of the January's supposedly hiked stock prices and volume as large numbers of naked writers covered positions by buying stock on the NYSE, thus forcing up prices and boosting trading activity."

More recently, a study by Robert Klemkosky (3) which covered 14 expiration periods in 1975 and 1976 concluded that on a cross sectional basis, the aggregate price behavior of the underlying common stocks was affected by the expiring series of options. The Klemkosky study was based on weekly residual returns and did not include the number of exercises in each stock.

This research is a revision of an earlier effort (4) by this author which utilizes a methodology more sensitive than that used by CBOE to test the impact of exercises upon price performance on a cross sectional basis, and utilizes daily exercise data to test the impact of exercises on a stock by stock basis. For this study, the alpha's and beta's developed by the SEC for its option study (8) are used. The SEC's Office of Economic Research estimated beta as follows: market returns and stock returns were calculated on a daily basis for a six month period centered around the expiration date. To ensure that the betas were not influenced by abnormal returns, if any existed, during the exercise period, the ten days prior to and the five days subsequent to expiration were excluded. The data was fitted to the market model: predicted return on stock= alpha + beta x return on market + error term. The periods for which these Beta's overlapped the time periods covered by the CBOE studies were the following: April, 1975 and January, 1976. For April, 1975, the exercise data for each of 40 stocks for each of the last seven days prior to expiration was made available by CBOE. For January 1976 similar data was provided for 46 stocks. Stock price data was obtained from Telstat tapes.

The methodology employed can be divided into two areas: cross sectional analysis, and individual stock analysis. In each area, both regression analysis and Spearman rank correlation are used.

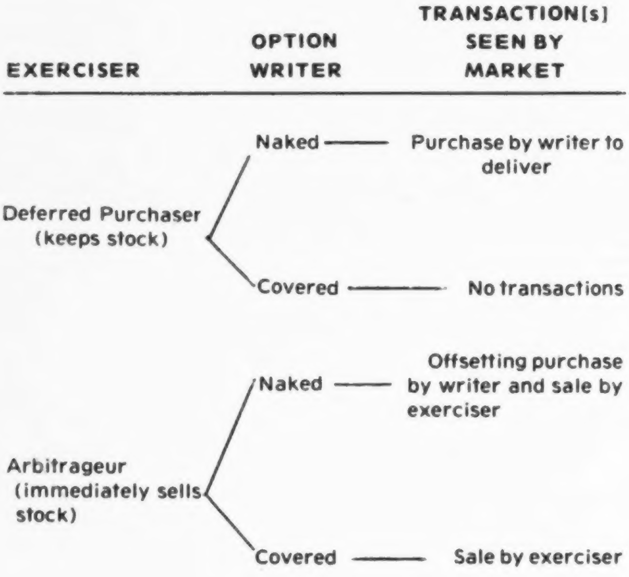
EXERCISER
OPTION WRITER
TRANSACTION[s] SEEN BY MARKET
Naked
Purchase by writer to deliver
Deferred Purchaser (keeps stock)
Covered
No transactions
Naked
Offsetting purchase by writer and sale by exerciser
Arbitrageur (immediately sells stock)
Covered
Sale by exerciser

FIGURE I: SOURCES OF EXERCISE IMPACT

CROSS SECTIONAL ANALYSIS

In the cross sectional analysis, the methodology is as follows: the exercises for each stock in the last seven days are totaled, and then related to (divided) by) both volume for the period, and separately, shares outstanding. Thus there are two independent variables, and each is tested separately. The volume related variable is felt to be the more meaningful; the shares outstanding related variable is utilized only to allow comparison with the results of the CBOE study which utilized a similar variable.

Stock performance (the dependent variable) is measured over the seven days in three ways:

1) $ROR_{stock} - ROR_{market}$ denoted as variable N (for **No** volatility correction)

2) $ROR_{stock} - Beta \times ROR_{market}$ denoted as variable B (for **Beta** correction)

3) $ROR_{stock} - (alpha + Beta \times ROR\ market)$ denoted as variable B A (includes **Alpha**)

(where NYSE index represents market)

Rates of return were calculated as follows:

$$ROR_{stock} = (P_7 - P_o)/Po$$

where P_t = price on day t. Similar calculations were performed for the NYSE index.

Test 1.a. The relationship between the variables was measured with regression analysis in which the predictive equation was as follows:

Relative price performance = constant + b x numbers of exercises (deflated + error term.

Thus, six regressions were performed for each exercise month, corresponding to the two ways of expressing the independent variable and the three ways to measure price performance.

Regression analysis, as described above, postulates a linear relationship between the variables as well as other assumptions regarding the normality and homocedasticity (equal variance) of the residuals. In the event that a non-linear relationship existed, or the assumptions regarding normality and homocedasticity could not be met, the following non parametric test was performed, as described below:

Test 1.b. The independent and dependent variables as used in the previous tests were ranked according to value, and the Spearman rank correlation coefficients were computed for each set of data, and tested for significance. A positive coefficient would indicate that the stock performed better, relative to the market, on the days with the most exercises, and vice versa.

The Last Four Days

The choice of a seven trading-day interval for exercises and price performance in the preceding tests was dictated by the data: only seven days of exercises were tabulated by CBOE. Visual inspection of the data indicated that the last four days exhibited considerably more exercise activity than the earlier portion of the expiration period. For this reason, the tests performed in the preceding section were repeated using exercise and price performance for the last four days of the expiration period. These will be designated as Tests 2a and 2b and result in six regressions and six Spearman rank correlations, respectively.

Level of Significance

In the presentation of results, the level of significance will be 10 percent. This is admittedly not vigorous, but has been chosen for two reasons. First, the earlier work by CBOE resulted in virtually no significant results. The use of 10 percent will allow the reader to be exposed to those reults that are "almost" significant at lower levels. Second, in the four day rank correlation test, perfectly correlated variables are significant at .001 percent; the next level of significance is .10 percent. If any level less than 10 percent were chosen, only perfectly correlated pairs would be shown. In each case the level of significance will be shown so that the reader will be able to apply his own filter if desired.

Results of Cross Sectional Analysis

The results of the cross sectional analysis are presented in Tables 1 and 2. For April 1975, neither the regression coefficients nor the rank correlation coefficients are significant for the seven day results. In the four day results, the regression coefficient for the volume related independent variable and the dependent variable that incorporates alpha in the market model is negative and is significant at less than 10 percent. The associated rank correlation is also negative and significant at less than four percent. In addition, the rank correlation for the other volume related variables are significant at less than 8 percent. Thus, it appears that in April, 1975, on an aggregate basis, a high level of exercises was associated with poor price performance in the underlying stocks.

In January, 1976 (see Table 2) the results are strikingly different. For the seven day test, four of the regression coefficients are significant at less 10 percent, and two of those are significant at less than 5%. The rank correlations associated with these significant regression relationships are all significant

at less than 1%. For the two regressions which did not yield significant coefficients, the rank correlations are significant at 1.7% and 5.3%. The direction of the relationship is positive, that is, a high number of exercises was associated with good price performance relative to the market.

In the four day tests, the regressions also yielded significant results: two coefficients of the volume deflated variable are significant at less than 5%, and the other at 10%. The associated rank correlations are significant at less than 1%, and 3% respectively. For the shares outstanding variable, one coefficient is significant at less than 10%, and the associated rank correlation is significant at 2.6%. The other rank correlations are significant at 4.3% and 5.5%.

The significance of both regression coefficients and rank correlation coefficients seems to contradict the absence of significant results reported by the CBOE. Unfortunately, no general statement about the impact of options can be made because the direction of impact is different for each of the two months studied. This is consistent with the varied impact reported (but not substantiated statistically) in the financial press (7) and (5).

This is not to say, however, that exercise activity **caused** the associated relative price declines or increases. In January, for example, price increases may have triggered exercises, although the likelihood that this is the case is somewhat diminished by the use of **relative** price performance. Thus, a stock can outperform the market, even though it declines in price. Only absolute price increases should trigger exercises (such as by lifting the stock above the next higher striking price). The results indicate that the stocks, on a cross sectional basis, outperformed the market the most (whether the market was up or down) on the days with the most exercises (relative to volume) for January, and the reverse was true in April, 1975.

While several regression coefficients are significant, the associated R^2 values are rather low, with the highest only .13. While this is at first disappointing, it can be largely explained by the results of the individual stock tests, which will be described below.

INDIVIDUAL STOCK ANALYSIS

The following tests were performed on each stock individually in an attempt to determine whether the exercise activity of each option class (such as for Avon, or Polaroid or GM, for example) exerted a significant effect on the price of the underlying security.

Test 3.a. The purpose of this test is to determine whether there is a relationship between the daily option exercises in a particular stock and the daily price movements of that stock. Regression analysis was performed with a measure of price performance as the dependent variable and the number of exercises (deflated by volume) as the independent variable. The price performance of each stock was expressed relative to the market, where the NYSE index was used as the market. Daily price performance was expressed as follows:

a) $ROR_{stock} - ROR_{market}$

b) $ROR_{stock} - Beta \times ROR_{market}$

In these tests, alpha was not included, because the addition of alpha to the predictive model for each day's performance would only change the scale (and hence, the regression intercept) but not the slope, significance or R^2. Two regressions were performed on each stock, corresponding to the two measures of price performance. There were seven daily observations for each stock.

Test 3.b. As outlined to Test 1.b., certain assumptions are required for a valid regression, and the linear regression model uses tests only for a linear relationship. In the event the assumptions cannot be met (and they are difficult to test with only seven observations), or in case the relationships between the variables (if any exists) is not linear, a nonparametric test was performed. Each measure of price performance was ranked as were the deflated exercises. Spearman rank correlation coefficients were calculated for each variable pair. A negative rank correlation would indicate that high levels of exercises were associated with poor relative price performance, and vice versa.

The Last Four Days

As described under the section on Cross Sectional Analysis, the bulk of the exercises appeared to occur in the final four days prior to expiration of the options. For this reason, the last four days were analyzed separately. Unfortunately, the use of only four data points would yield regressions and rank correlations that might be suspect due to the few observations. Nevertheless, the regression coefficients and rank correlations were tested for significance. Because of the small number of observations, the required F (or t) statistics for the regression are substantially higher at any level of significance compared to the value determined for a larger number of observations. (For example, in the four day tests the required F value at 1% is 98.5, whereas for the cross sectional tests with 46 observations it was 7.24.)

Test 4.a. Analogous to Test 3.a. except that data from the last four trading days prior to expiration were used. Two regression equations were estimated.

Test 4.b. Analogous to Test 3.b. except that data from the last four trading days prior to expiration were used. Two rank correlation coefficients were calculated.

Results of Individual Stock Analysis

The results of the seven day and four day daily regressions for individual stocks are presented in Table 3 (April, 1975) and Table 4 (January, 1976); cases are included only when significant at less than 10%. Table 3 contains entries for only three stocks for the seven day test and five stocks for the four day test. Because the level of significance is 10%, we would naively expect about four entries in each table even if the variables were independent. Thus, the results shown may easily be due to chance. Similar comments apply to the results presented in Table 4, where only three and six stocks appear for the seven and four day tests respectively. The associated rank correlations (if significant at less than 10%) are also shown in Tables 3 and 4. It is interesting to note that virtually all of the regression entries have a corresponding significant rank correlation. The reader should also notice that in each month, more significant results appear for the last four day tests than for the seven day tests. This is probably because the data for the early days (in the seven day tests) frequently contain zeros (no exercises) and this "noise" masks the true relationship that is revealed in the four day test.

A comparison of Table 3 with Table 4 shows that none of the stocks listed in Table 3 appear in Table 4. Thus, even if option exercises do affect price performance, they do not have the same impact each expiration.

The results of the rank correlation tests are presented in Table 5-8. If we consider the beta adjusted variable pair, more-stocks exhibit significant relationships in the four day test than the seven day test for both April and January, just as in the regression test. Moreover, the results demonstrate the same effect that was mentioned earlier, that is, the impact is not the same at each expiration. In fact, a comparison of the four day results (Table 6 and 8) reveals that very few stocks appear on both lists: only GM, KN, NWA, and S. And for each of these, the coefficient is positive for one of the months and negative for the other! No systematic pattern is evident in the results, and thus, even if the relationships were economically important, no trading rules could be formulated from the data now available.

The results presented in Tables 5-8 also help to explain the low R^2 values for the cross sectional results. In each table, some relationships are direct and others are inverse, and the cross sectional regression could not explain this divergent behavior.

Results are presented when significant at .10 or less, and as before, we might naively expect four or five stocks to appear in each table even if the variables were not related. If we consider only variable pair 2 (the pair which includes the beta adjusted performance measurement), significant results appear in Tables 5-8, for 10, 15, 11 and 13 stocks respectively. This is far greater than the number of significant regressions results, and indicates that the relationship is probably not linear, and might suggest, for example, that there is some threshold level of exercises needed before price is affected. In any event, there are more entries in the tables than can be easily be explained by chance, and it appears that option exercises do have an impact on relative price performance.

Economic Significance

If we assume for the moment that option exercises do have an impact on the relative price performance of the underlying stocks, we would next want to know if this measurable statistical relationship has any economic significance. One method of measuring economic significance would be to consider whether profitable trading rules could be developed. As mentioned earlier, no such rules are apparent in view of the changing stocks and signs from month to month. Another method would be to calculate the expected excess return (compared to market model) according to the regression equation. This calculation was performed for each of the stocks which appeared in Table 3 and 4 and had significant regression coefficients (Variable pair 2) on a four day basis. For each stock, the predicted excess return was calculated as follows. $\text{ROR}_{\text{stock}} - \text{beta} \times \text{ROR}_{\text{market}} = \text{constant} + \text{b} \times \text{daily exercises} \div \text{daily volume}$

The calculation was made using the maximum value of daily exercises/daily volume to note the maximum predicted "excess" return. These excess returns varied from —3.3% (for Sears, April, 1975) to +3.2% (RCA, January, 1976). Only one of the nine fell on the ± 1% range; all others exceeded 1% in the same di rection as the sign of the regression coefficient. (These predictions were reasonably close to the observed values for the same day). While this is the **maximum** predicted excess return, it must be remembered that this is on a daily basis. If the economic significance is measured by the distortion in aggregate market value of the affected companies, or by the changing return on large institutional portfolios, it appears that option exercises have the potential to affect the wealth position or growth of investors.

Summary and Suggestions for Further Research

A methodology similar to that used by the CBOE in its research, but incorporating a longer measuring interval, discerned statistically significant relationships between call option exercises and the price performance of the underlying shares, after removing the market component and adjusting for volatility. This relationship appeared on a cross sectional basis and for many individual stocks. Results of individual regression analyses were not conclusive, but sufficiently large numbers of stocks exhibited a significant rank correlation to conclude that option exercises and relative price performance are related.

Because the indicated relationship varied from stock to stock and month to month, further research should be undertaken to determine the cause of the direction of impact. It is this author's opinion that the option writer's position—covered or naked—may provide some explanation. At this time, no data regarding the exercisable short interest in particular option series is made public, but it is collected monthly by the SEC. If the collection date of the data were standardized with reference to expiration—such as one week prior to expiration—as opposed to being collected on the 15th of the month as is done now, further research would be facilitated. Later researchers may wish to use industry indices rather than a market index for rate of return "prediction".

Finally, listed put trading is approaching the end of its second year. Similar tests should be applied to the exercise of puts to determine if they, too, have an impact on the market, and whether the impact (if any) heightens or lessens the impact of exercises of calls.

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FOOTNOTES

[1] A deferred purchaser is defined here as an investor who buys an option with very little "time" premium, with the intention of later exercising to initiate a long position in the stock. The purchase of the call allows the investor to defer full payment for the security until exercise, while retaining the same profit/loss position as outright purchase of the stock.

[2] Dividends were not included in the calculation of rate of return. In Tables 5-8, only one of the stocks appearing went ex-evident during the period studied (INA on January 12, 1976).

TABLE 1

April 1975

Test 1.a					Test 1.b.	
Dependent Variable	Independent Variable	B	F [1,38]	R^2	Spearman Correlation	Level of Significance
N	E/So	4.149	.597	.015	.0738	.325
N	E/V	−2.466	.768	.020	−.0865	.298
B	E/So	.161	.675	.017	.0685	.337
B	EVV	−2.444	.729	.019	−.1024	.265
A	E/So	4.130	.440	.011	.0632	.349
A	E/V	−3.203	1.284	.033	−.1514	.176

Test 2.a.					Test 2.b.	
Dependent Variable	Independent Variable	B	F [1,38]	R^2	Spearman Correlation	Level of Significance
N	E/So	− .034	.019	.001	−.1000	.270
N	EV/	−2.647	2.544	.063	−.22.70	.079
B	E/So	− .025	.010	.000	−.0863	.298
B	E/V	−2.721	2.632	.065	−.2298	.077
A	E/So	− .055	.049	.001	−.1191	.232
A	E/V	−3.055	3.517*	.085	−.2856	.037

TABLE 2

January 1976

Test 1.a					Test 1.b.	
Dependent Variable	Independent Variable	B	F [1,44]	R^2	Spearman Correlation	Level of Significance
N	E/So	2.67	6.634**	.131	.4181	.002
N	E/V	5.008	5.551**	.112	.3559	.008
B	E/So	.168	2.893*	.062	.3479	.009
B	E/V	3.814	2.672*	.077	.3247	.014
A	E/So	.143	1.970	.043	.3120	.017
A	E/V	2.630	1.616	.035	.2412	.053

Test 2.a.					Test 2.b.	
Dependent Variable	Independent Variable	B	F [1,44]	R^2	Spearman Correlation	Level of Significance
N	E/So	.173	3.326*	.070	.2872	.026
N	EV/	2.815	4.983**	.102	.3639	.006
B	E/So	.147	2.436	.052	.2554	.043
B	E/V	2.639	4.453**	.092	.3467	.009
A	E/So	.131	2.026	.044	.2385	.055
A	E/V	2.135	2.986*	.064	.2920	.024

*Significant at less than 10%

**Significant at less than 5%

TABLE 3

April 1975

Individual Stocks: Seven day (test 3a) and four day (test 4a) regression.

Test 3.a.						Test 3.b.	
Stock	Variable Pair	Beta	F	Significance	R^2/ Adusted	Rank Correlation	Level of Significance
DOW	1	5.828	6.116	10%	.550/.460	.9643	.001
	2	5.731	6.805	5%	.576/.492	.9643	.001
LTR	2	1.023	4.642	10%	.481/.378	.8571	.007
MMM	1	—1.747	5.35	10%	.519/.420	—.6429	.060
	2	—1.691	4.93	10%	.497/.396	—.6429	.060

Test 4.a.						Test 4.b.	
Stock	Variable Pair	Beta	F	Significance	R^2/ Adusted	Rank Correlation	Level of Significance
F	1	1.822	21.583	5%	.915/.873	1.0	.001
	2	2.129	31.484	5%	.940/.910	1.0	.001
KMG	2	.704	22,97	5%	.920/.880		
LTR	1	2.572	360.736	1%	.994/.992	1.0	.001
S	1	—2.996	12.026	10%	.857/.786	—.8	.10
	2	—2.940	20.721	5%	.912/.868	—.8	.10
WY	2	1.347	8.866	10%	.816/.724	1.8	.10

TABLE 4

January 1976

Test 3.a.						Test 3.b.	
Stock	Variable Pair	Beta	F	Significance	R^2/ Adusted	Rank Correlation	Level of Significance
INA	1	—1.214	40.223	1%	.889/.867	—.9286	.001
	2	—1.213	40.062	1%	.889/.867	—.9286	.001
MCD	2	— .417	5.866	10%	.540/.448	—.7857	.018
RCA	1	1.649	10.674	5%	.681/.617	.6071	.074
	2	1.760	22.495	1%	.818/.782	.6786	.047

Test 4.a.						Test 4.b.	
Stock	Variable Pair	Beta	F	Significance	R^2/ Adusted	Rank Correlation	Level of Significance
FNC	2	—11.058	77.42	5%	.975/.962	— .8	.10
GW	1	.700	9.227	10%	.822/.733	.8	.10
INA	1	— 1.203	14.540	10%	.87./.819	—1.0	.001
	2	— 1.200	14.493	10%	.879/.818	—1.0	.001
IGL	1	— 5.236	10.813	10%	.844/.766	— .8	.10
MTC	2	.413	78.068	5%	.975/.963		
RCA	1	1.852	17.094	10%	.895/.843	.8	.10
	2	1.694	21.807	5%	.916/.874	.8	.10

See Note on Table 3

TABLE 5

April 1975 7 Day Bank Correlation

STOCK	PAIR	COEFFICIENT	SIGNIFICANCE
AVP	1	.6429	.06
	2	.6429	.06
DAL	2	—.6307	.064
DOW	1	.9643	.001
	2	.9643	.001
GWF	2	.5714	.090
GW	1	—.5766	.088
	2	—.5766	.088
HR	1	—.7143	.036
	2	—.7143	.036
ITT	1	.7143	.036
	2	.5714	.090
LTR	1	.7857	.018
	2	.8571	.007
MMM	1	—.6429	.060
	2	—.6429	.060
PZL	1	.8571	.018
	½	.7857	.018

TABLE 6

April 1975 4-Day Correlation

STOCK	PAIR	COEFFICIENT	SIGNIFICANCE
AA	2	.8	.10
ARC	1	.8	.10
	2	.8	.10
DOW	1	.8	.10
	2	.8	.10
F	1	1.0	.001
	2	1.0	.001
GM	1	—.8	.10
	2	—.8	.10
IBM	1	—.8	.10
	2	—.8	.10
[illegible]	1	.8	.10
[illegible]	1	.8	.10
LTR	1	1.0	.001
	2	1.0	.001
MCD	1	—.8	.10
	2	—.8	.10
MMM	1	—.8	.10
	2	—.8	.10
NWA	2	.8	.10
PZL	1	.8	.10
	2	.8	.10
PRD	1	—.8	.10
	2	—.8	.10
S	1	—.8	.10
	2	—.8	.10
SY	2	—.8	.10
IAN	1	—.8	.10
WY	2	.8	.10

TABLE 7

January 1976 7 Day Rank Correlations

STOCK	PAIR	COEFFICIENT	SIGNIFICANCE
T	2	−.6429	.060
BS	1	.6429	.060
	2	.7143	.036
EK	2	.7143	.036
FNM	1	−.6786	.047
	2	−.6786	.047
GW	1	.6429	.060
	2	.5714	.090
INA	1	−.9286	.001
	2	−.9286	.001
IBM	1	.5714	.090
HR	2	.6301	.065
KG	1	−.6071	.074
LTR	2	−.5714	.090
MCD	1	−.7143	.036
	2	−.7857	.018
NWA	1	−.6786	.047
RCA	1	.6071	.074
	2	.6786	.047
UPJ	1	−.8571	.007
	2	−.8571	.007

TABLE 8

January 1976 4-Day Rank Correlations

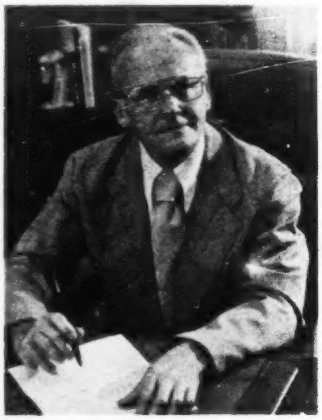
STOCK	PAIR	COEFFICIENT	SIGNIFICANCE
T	1	−.8	.10
	2	−.8	.10
AVP	2	−.8	.10
FNC	2	−.8	.10
FNM	1	−.8	.10
	2	−.8	.10
GM	1	.8	.10
	2	.8	.10
GW	1	.8	.10
	2	.8	.10
INA	1	−1.0	.001
	2	−1.0	.001
IGL	1	−.8	.10
	2	−.8	.10
KN	1	.8	.10
	2	.8	.10
KMG	2	−.8	.10
NWA	1	−.8	.10
RCA	1	.8	.10
	2	.8	.10
SY	1	.8	.10
	2	.8	.10
TSO	1	.8	.10
	2	.8	.10

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Como	
Taylor Woodcraft, Inc.	
Wood Products	75
Meridian	
Short Cut Lumber Co.	
Crating, Pallets, Patterned Wood Stock	30
Southern Cast Products	
Steel Jobbing Foundry	25
Mantachie	
Mantachie Furniture Manufacturing, Inc.	
Living Room Sets	20
New Albany	
Master Mark, Inc.	
Upholstered Furniture	120
EXPANDED	
Amory	
Trace Trouser Corporation	
Apparel	65
Tupelo	
Tupelo Aluminum Products	
Storm Windows	24

The Dean's Corner

The Mississippi Economic Council, under the able direction of Bob Pittman, has for many years devoted countless man hours of the state's leading citizens to the study of all facets of the state's political and economic life. Each year, as the result of these deliberations by appropriate committees and after the Board of Directors has voted approval, recommendations are adopted in the form of "Policies and Recommendations", of which are published in a monograph entitled "**Policies and Recommendations**", of the MEC. Because of the caliber of the agricultural, business, political and professional leaders involved in this process, it is unfortunate that this document does not provide more impact on the running of the state.



Again, this fall, the Economic Development Committee of the Council composed of approximately 25 of the states business and professional leaders, met for an extended session (a portion of two days) to deliberate on the economic status of the state. In accordance with its mission the Committee has for two years attempted to diagnose the economic maladies or deficiencies causing the state to remain in its unenviable position of last place in the array of states by per-capita income.

While the state's per-capita income has moved from only 37% of the national average in 1940 to 71% in the year just passed (1978), the dollar differential continues to increase. The difference last year was $2,300 as compared with $1,866 in 1976, and approximately $2,000 in 1977. For 1978 the Mississippi per-capita income was only slightly more than one-half of the highest state, Alaska, $5,529 compared with $10,963. If one were given to jumping to conclusions, one would surmise that there is an inverse relationship between the mildness of climate and personal income. This conclusion would be reinforced when the second highest per-capita income state turns out to be Nevada and the second lowest Arkansas. Or one could conclude that the "Sun Belt" and economic adversity are synonomous terms, since going down the array of states not a single Southern state is encountered until the twenty-eighth place (Texas) occurs. (The above data are from the U.S. Department of Commerce, Bureau of Economic Analysis, as recently revised.) However, jumping to conclusions is a poor form of exercise, both physical and mental, and the Economic Development Committee has discovered that the explanation for the state's lowly economic status becomes even more complex, as it delves more deeply into the problem.

In previous "Dean's Corners'" attempts have been made to identify those factors which explain the paradox of a state with good resources, hard working people, splendid climate, a larger percentage of the work force engaged in manufacturing than the nation, a commitment to economic development, and yet the lowest per-capita income of all states. The MEC Committee on Economic Development has studied and discussed all of these factors for hours at a time. This year the decision was reached to concentrate on a few remedial areas, and its findings are to be found in a 83-page document ably prepared by Bob Pittman and his staff. A brief discussion of these six areas will follow.

(1) **The Need for an Alliance of Southern States.** As the result of the myth of rapidly migrating business firms from the North to the "Sun Belt" (and it is, indeed, a myth) the governors of seven northeastern states recently formed a "Coalition of Northeastern Governors". This was followed by the formation of the "Northeast Congressional Coalition". Then followed the "Northeast-Midwest Congressional Coalition", a group containing one-third of U.S. senators and 213 congressmen (almost a majority of the House). The purpose of these Coalitions is apparently to influence governmental action against the economic progress of the South where this seems to conflict with the interests of the North. As was stated in **Business Week**, May, 1976, "The second war between the states will take the form of political and economic maneuver. But the conflict can nonetheless be bitter and divisive because it will be a struggle for income, jobs, people, and capital", (quoted from the previously referred to report of the MEC Committee). There is abundant evidence that the opening salvos have been fired, and if the South is to survive the onslaught it seems that some sort of Southern Alliance must be put together very soon. Protection will be needed to prevent Federal action requiring pollution abatement expenditures at the same level as in the northeast where pollution is a much more serious

problem. There is some fear that standards will be arbitrarily set so as to require unnecessary changes in the South where pollution is not a serious problem in most areas. This would, of course, retard economic development and waste scarce capital and other resources. Another need for protection is the possible favoring by the Federal government of other regions in energy cost. Also, there is a matter of Federally funded projects and defense spending. For these and other reasons the MEC Committee feels that some sort of Southern organization comparable to those mentioned above in the North should be formed.

(2) Mississippi's Business Climate

Another area of endeavor requiring attention in the amelioration of the state's economic status is that of continuing efforts to provide a favorable business climate.

A study prepared this year by Alexander Grant and Co. for the Conference of State Manufacturers' Associations ranked Mississippi number one in the nation in terms of a favorable business climate. Paradoxically, some of the states with the highest per-capita income were ranked very low, such as Michigan which ranked 48th. A number of variables were used in the study in ranking the states, a summary of which follows with respect to the relative standing of Mississippi among the 48 contiguous states.

BUSINESS CLIMATE FACTORS

Factor	Miss. Rank
Overall Business Climate (1=highest rank)	1
Manufacturing Jobs Won 1968-78 (1=highest rank)	7
Union Membership as a % of Total Labor Force (1=lowest %)	4
Energy Costs Per 1 mil. BTU's—1976 (1=lowest cost)	13
Avg. Weekly Manufacturing Wage—1978 (1=lowest)	3
Ave. Hours Lost Because of Stoppages ÷ Number Workers—1976 (1=lowest)	12
State & Local Taxes Per-Capita—1976-77 (1=lowest)	3
Percentage Change in State & Local Taxes Per-Capita—1971-76 (1=lowest)	20
Percentage Change in Per-Capita State Debt—1971-76 (1=lowest)	13
State Spending vs. State Income Growth —1978 (1=lowest)	10
State Debt Per-Capita—1976 (1=lowest debt ratio)	12
State Spending Per-Capita—1976 (1=lowest	11
State Unemployment Compensation Trust Fund per Worker—1976 (1=highest)	4
Percentage Change in Energy Cost Per 1 mil. BTU's—1971-76 (1=lowest)	39
Vocational Education Expenditures Per-Capita—1976 (1=highest)	28
Private Pollution Abatement Expend. ÷ Value of Industrial Shipments 1976 (1=lowest)	20
Private Pollution Abatement Expend. Per-Capita—1976 (1=lowest)	31
Unemployment Compensation benefits Paid per Covered Worker—1976 (1=lowest)	2
Workmen's Comp. Insurance Rate per $100 Payroll-Manufacturing—1978-1979 (1=lowest)	14
Benefits for Disability Under Workmen's Comp.—1978 (1=lowest)	12
Average Rank for All Factors	13

In spite of its low income status, Mississippi displays a favorable business climate. In order to improve the lot of the state this must be continued through such basic things as maintaining the "right-to-work law," our favorable tax structure (including favorable unemployment and workers' compensation) and increased job training or technical education programs.

(3) **Economic Advisor to the Governor.**

To coordinate various economic development activities of the several groups involved, including the Research and Development Center and the Board of Economic Development (old A&I Board), the M.E.C. Committee felt that the Governor's office should be the key and that a highly qualified economic advisor be added to the Governor's staff. Every effort should be made by the Governor to fill this position with the type of person who has the expertise to serve well and who would have the respect of the business community. The advisor could also work in an advisory capacity to the legislature. This position would be of such importance in the State's economic development that the normal budgetary restrictions on such things as salary and travel should be removed.

(4) **Professional Industrial Development.**

The competition among states and cities for new industrial enterprises is so great that only a small proportion of smaller cities seeking industry will attract new firms in any given year or so. Mississippi was one of the early states to formally adopt an industry hunting agency, the Agricultural and Industrial Board (A&I Board) established during the 1930's. However, the Director of this Board has tended to be chosen by past governors because of political consideration instead of professional qualifications. Many of the full-time employees of the Board have had similar backgrounds. The legislature in its last session reorganized the old A&I Board and changed the name to the Mississippi Board of Economic Development. This Board will become operative in 1980.

The MEC Committee strongly recommends that the new Board be staffed with only qualified, professional employees and that the Board members (14 members, 7 ex-officio and 7 public members) be truly outstanding citizens. It is also recommended that the Board provide training programs for local individuals and groups engaged in industry hunting.

(5) **Small Business Development.**

It has been said that greater effort and more concessions have been made to attract outside firms than to encourage the expansion of locally owned enterprises. Whether or not this is true, there is great reason to offer at least the same assistance to home-grown companies. The profits tend to remain in the State, and the higher paying management positions are filled by residents instead of by those in some distant headquarters. This is not to say that outside companies should be neglected; both efforts should be cultivated.

The MEC Committee feels that not only the same incentives should be offered to domestic companies but that good management training programs should be provided to help small business operators to compete. Lack of management skills is one of the main impediments to small business firms' lack of success.

(6) **Improve the Level of Education in Mississippi**

In terms of both the average number of grades completed as well as success in test scores, **et cetera**, Mississippi lags behind the nation. This is one of the major causes for its low per-capita income status.

The MEC Committee feels that much greater effort should be made in the early grades to develop the basic reading, writing and comprehension skills. It was also felt that competency tests should be administered at appropriate levels before promotion is permitted to the next level. Compulsary attendance should also be adopted. Education at all levels should be adequately supported in order to provide the quality of education so badly needed to move the State off the bottom of the States' array by per-capita income.

The Mississippi Economic Council will continue to devote extensive study to the economic problems of the State. These six steps represent good points of emphasis for the time being. As progress is made in these, additional recommendations will be forthcoming.

—Gainess M. Rogers, Dean

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	October 1979	September 1979	October 1978
Retail Sales	173.8	169.4	188.1
Electric Sales	195.7	197.4	198.8
Telephones in Service	219.3	218.3	209.3
Gasoline Gallonage	142.8	143.1	158.1
Loans of Savings & Loan Institutions	254.2	239.1	365.5

MEET THE FACULTY

Dr. Louis F. Ebersole
Department of Finance

Louis Ebersole is a faculty member of the Department of Finance at Mississippi State University.

Dr. Ebersole came to Mississippi State in 1965 from Saint Andrews Presbyterian College. Some of his areas of teaching competence are money, credit and prices, real estate, management, insurance, and corporation finance. However his specialties are Macro-micro finance and industrial relations.

Born in Birmingham, Alabama, Dr. Eb (as he is fondly called) received an A.B. from Howard College and his B.S., M.S., and Ph.D. from the University of Alabama.

Tourist Briefs

Natchez Bluffs and Under-the Hill Historic District

Natchez, Mississippi

The area in and around the Natchez Bluffs and Under-the-Hill Historic District is associated with the earliest recorded history of the Old Southwest. In 1700, Pierre Lemoyne d'Iberville selected the home of the Natchez Indians, where the city of Natchez now stands, as the future site of a fortified settlement. Sixteen years later the first Fort Rosalie was erected by Jean Baptiste Lemoyne Bienville, brother of d'Iberville, and named in honor of the wife of the County of Ponchartrain, Minister of Marin Affairs. Control of the culturally advanced Natchez tribe, as well as domination of river traffic and communication, had influenced the choice of site, which within a few years became the nucleus of a thriving agricultural community. The success of the latter was largely based on abuses dealt the Indians, however (chief of which was appropriation of their lands), and in retaliation 232 French men, women, and children were massacred on November 28, 1729, and Fort Rosalie subsequently destroyed. The Natchez were in turn dispersed westward across the river by a punitive expedition sent from New Orleans and they never regained their tribal identity. Their tragedy would later be rendered by the French author Francois Auguste, Vicomte de Chateaubriand, into some of the most avidly read romantic fiction of the early nineteenth century: **Rene**, **Atala**, and **Celuta**.

Fort Rosalie was rebuilt during 1730-1734, but with the decline in cultivation of French agricultural holdings in the area, it became a mere way station for river travel. In 1763, following England's triump over France in the Seven Years' War, it was occupied by British troops and thereafter known as Fort Panmure in honor of a minister of George III. Although with the new name it assumed new significance (that of a frontier outpost on an international boundary), the fort was garrisoned for less than four of the sixteen years in which England held it before yielding to Spanish appropriation during the American Revolution. Pro-British settlers of the Natchez District staged an abortive rebellion in 1781, but Fort Panmure continued in Spanish possession until the American flag was raised over the works on March 30, 1798. It was occupied only briefly by the United States before being abandoned in favor of the more strategically located Fort Adams, thirty-five miles south of Natchez on the boundary between the United States and Spanish West Florida. The lands and buildings of Fort Panmure were sold in 1801 to William Dunbar, planter, scientist, and explorer of the Old Southwest, and ca. 1820 a subsequent owner, Peter Little, erected north of the fort site his mansion Rosalie, now headquarters of the Mississippi Daughters of the American Revolution. The remaining fort acreage is presently in multiple private ownership and partially developed into a residential district.

A lingering local tradition that the 1716-1729 Fort Rosalie physically survived the Natchez uprising to become the Fort Rosalie/Fort Panmure of later years is negated by the contemporary communications of the French colonial government.It is the same site, however, John Monette, in History of the Mississippi Valley, described the 1716-1729 fort as "remote from the bluff which overlooks the river. . .near the eastern limit of the present (1848) city of Natchez," a statement which is substantiated by J. F. H. Claiborne and Dunbar Rowland. Contemporary references to the location of the first fort are given in relation to the principal village of the Natchez Indians, i.e., the fort is identified as being between the river and the village. The latter was estimated by eyewitnesses such a Jean Penicaut and Dumont de Montigny to be one league to one-and-a-quarter leagues from the river, which corresponds to the modern measurement of three miles between the river and the village site. The fort was midway between river and village, thus indicating a distance of more than a mile from the river to the fort as opposed to the present approximately five hundred yards between the river and the site of the 1730-1734 fort.

The city park farther north along the bluffs has served as such since the emergence of the upper town, having been created as a public green or common during the administration of Manuel Gayoso de

Lemos, Spanish governor of the Natchez District, 1789-1798. Trees were planted, and for a time the granting of lots was forbidden as far inland as Canal Street in order to provide open space for the benefit of the settlement. Although the area which it encompasses has diminished, the park continues to serve the same purpose as when it impressed early visitors to the city. In 1909 the Mississippi Daughters of the American Revolution dedicated a stone marker in the park to commemorate the terminus of the Natchez Trace, and near it fly the five flags which have been raised over Natchez: French, English, Spanish, Confederate, and American.

The river landing beneath the bluffs was presumably established early in the period of French colonization and served in turn the British, Spanish, and Americans who occupied the fort and populated the growing town. With the beginning of the Mississippi territorial period, the landing became the southwesternmost outlet of the United States and a factor in negotiations for the Louisiana Purchase. Although characterizations of Under-the-Hill which date from the 1700's, like physical descriptions, are rare, its unsavory reputation appears to have originated in the early years of the century which followed. The Mississippi River, supporting flatboat and keelboat traffic, generated the development of a criminal element in Under-the-Hill which was augmented by the proximity of the Natchez Trace. Boatmen, gamblers, river pirates, highwaymen, and prostitutes populated the port, of which one visitor wrote in 1810: ". . .for the size of it, there is not perhaps in the world, a more dissipated spot." The coming of steam navigation after 1811 apparently altered the image of Under-the-Hill only for the worse.

Changing conditions, however, in time wrought an accompanying change in the character of Under-the-Hill. The bandit-plagued Trace gave way to a well-established stage route, and steamboating increased the volume of river trade to the extent that respectable mercantile firms and hotels found it expedient to share the landing with the barrooms and brothels. Growing security of travel by land and river and the transformation of Under-the-Hill into one of the world's most flourishing cotton markets stimulated a zeal for periodic clean-ups of its less reputable sections.

One of the severest blows to the image of Under-the-Hill as, in the words of one critic, "the early American Sodom" was dealth not by vigilantes but by the tornado of 1840. Contemporary newspaper accounts indicate the landing was devastated, with 400 lives lost and over one hundred flatboats, two steamboats, a ferry, and numerous buildings destroyed by strong winds and waves ten to fifteen feet high. Although the lower town, like the upper, recovered in time, it thereafter increasingly reflected the interests of legitimate business operations.

At the beginning of the Civil War, fourteen companies of confederate soldiers debarked from Under-the-Hill, but actual conflict did not reach it until September 2, 1862.On that date a gunboat from the **USS Essex** landed to procure ice for sick crew members and was fired on by the home guard. In retaliation for the killing of one seaman and the wounding of five others, the **Essex** shelled the Natchez heights and the landing, but the latter, being more exposed to gun range, suffered greater damage both from the bombardment and the fires which followed. One civilian, a seven-year-old girl, was killed before the town unconditionally surrendered.

Following the war and the passing of the golden era of steamboating, Under-the-Hill went into a gradual economic decline which terminated in its demise upon completion of the Natchez-Vidalia Bridge in 1940 and the simultaneous ceasing of ferry operations across the Mississippi. Yet the reputation and the appeal of the place persist, as demonstrated by the number of visitors to the antebellum mansions of the upper town who year after year find their way down Silver Street as well.

EDITOR'S NOTE:

Bank Debit figures for the City of Laurel in September should have read 14.0 for month.

THE ABSTRACT WILL BE HERE SOON.

The **1979 Mississippi Statistical Abstract** will be available after the first of the year. This year's cost is $21.45 postpaid. Postage costs may be avoided by coming by 221 McCool Hall, MSU and picking up a copy. When picked up the cost is $19.95.

STATE ECONOMIC INDICATORS

Indicator	October 1979	September 1979	October 1978	Per Cent Change One Month Ago	Per Cent Change One Year Ago
EMPLOYMENT, EARNINGS AND HOURS [1]					
Total Employment (000's)	996,200	994,800	979,200	0.1	1.7
Non-Ag Employment	838,900	834,100	806,600	0.6	4.0
Mining	9,500	9,500	8,100	0.0	17.3
Contract Construction	49,900	49,500	43,800	0.8	13.9
Manufacturing	233,500	233,300	235,500	0.1	−0.8
Transportation and Public Utilities	41,200	39,900	38,800	3.3	6.2
Wholesale and Retail Trade	164,700	164,400	158,100	0.2	4.2
Finance, Insurance and Real Estate	32,200	32,200	31,500	0.0	2.2
Service	120,800	119,700	117,700	0.9	2.6
Government	187,200	185,600	173,100	0.9	8.1
Unemployment Rate (Per Cent Labor Force)	5.3	5.3	6.7	——	——
Average Weekly Earnings	202.51	186.50	186.65	8.4	8.5
Average Hourly Earnings	5.05	4.96	4.62	1.8	9.3
Average Weekly Hours in Manufacturing	40.1	40.0	40.2	0.3	−0.2
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.) [2]	3,158	3,094	3,315	2.1	−4.7
Gasoline delivered to Dealers (gals.) [3]	112,306	119,533	123,853	6.0	−9.3
Dairy Production					
Milk (lbs.) [4]	63,000	63,000	64,000	0.0	−1.6
Egg Production [4]	136,000	132,000	136,000	3.0	0.0
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations [5]	31,768	32,600	41,400	−2.5	−23.3
Construction Loans	3,561	4,700	4,400	−24.2	−19.1
Bank Loans [6]	1,454,624	1,448,023	1,388,402	0.5	4.8
Bank Deposits [6]					
Time Deposits [6]	84,758	89,881	104,588	−5.7	−19.0
Demand Deposits [6]	106,473	248,682	121,062	−57.2	−12.1
	21,715	158,801	16,474	86.3	31.8
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH) [7]	1,630,445	1,936,492	1,722,858	−15.8	−5.4
Telephones in Service [8]	1,454,624	1,448,023	1,388,402	0.5	4.8
AGRICULTURE (000's) [9]					
Total Cash Receipts from Farm Marketings	106,473	248,682	121,062	−57.2	−12.1
Cash Receipts from Marketing Livestock	84,758	89,881	104,588	−5.7	−19.0
Cash Receipts from Marketing Crops	21,715	158,801	16,474	−86.3	31.8
RETAIL SALES TAX COLLECTIONS [10]		1,163,467	1,141,054		

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[1] Mississippi Employment Security Commission
[2] State Oil and Gas Board for July
[3] Mississippi Motor Vehicle Comptroller
[4] Mississippi Crop and Livestock Reporting Service
[5] Federal Home Loan Bank of Little Rock
[6] Because of the lack of comparability, this series is being suspended.
[7] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority
[8] South Central Bell Telephone Company
[9] U.S. Department of Agriculture—Estimated for **August**
[10] Mississippi State Tax Commission

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago
Aberdeen	21.6	14.1	7,989	0.5	5.4	40,862	2.7	16.0	425,400	82,590	138,850
Baldwyn	20.6	14.3	4,566	0.6	5.9	18,045	— 1.8	22.2	— —	— —	— —
Batesville	33.5	2.7	8,397	0.0	5.5	46,577	— 0.2	40.0	604,300	62,500	67,600
Bay Springs	— —	— —	— —	— —	— —	21,770	— 4.7	19.8	— —	— —	— —
Bay St. Louis	— —	— —	12,893	0.5	8.8	17,177	3.0	—38.0	231,625	255,400	108,850
Belmont	4.7	19.4	2,191	0.4	6.4	8,526	7.3	—23.3	— —	— —	— —
Belzoni	— —	— —	4,740	0.8	5.6	23,821	10.9	17.2	— —	26,800	27,936
Biloxi	— —	— —	44,356	0.5	0.6	204,808	— 8.7	36.7	2,696,238	— —	1,051,542
Brandon	— —	— —	11,154	0.5	1.4	27,567	4.2	32.5	233,000	457,044	489,689
Brookhaven	— —	— —	15,763	0.3	2.9	93,040	— 4.8	25.6	— —	— —	— —
Brooksville	7.6	46.1	1,312	0.2	8.6	3,330	— 4.1	6.6	— —	— —	— —
Canton	— —	— —	10,540	0.6	5.9	56,431	— 7.5	20.1	— —	592,430	272,712
Carthage	18.6	8.6	7,262	0.9	6.8	32,285	— 9.4	24.5	1,224,500	112,800	61,000
Charleston	—	5.1	4,029	0.3	4.1	17,099	4.4	25.2	— —	— —	— —
Clarksdale	—	— —	20,470	0.4	4.4	106,497	2.9	14.9	374,424	140,012	128,277
Cleveland	—	— —	13,953	0.9	3.5	89,385	2.7	18.4	— —	— —	— —
Collins	35.5	18.8	4,536	—0.3	5.9	20,422	—39.9	—34.3	— —	—0—	—0—
Columbia	— —	— —	15,369	0.8	5.8	61,467	— 8.0	4.3	— —	— —	— —
Columbus	17.9	— —	33,308	0.3	4.5	191,715	4.7	22.9	675,501	267,256	539,472
Corinth	— —	— —	20,203	0.4	6.4	106,518	9.9	26.5	298,785	78,396	581,800
Crystal Springs	— —	— —	5,784	0.9	5.9	25,004	0.1	23.0	3,400	1,169,000	12,785
Drew	34.4	— 4.3	2,647	0.4	2.9	11,744	25.5	24.7	71,000	—0—	99,500
Edwards	— —	— —	1,592	4.7	6.6	3,855	1.6	28.2	— —	— —	— —
Ellisville	— —	— —	3,776	0.9	6.8	18,817	31.9	66.0	— —	— —	— —
Eupora	26.0	6.5	4,288	0.1	4.9	15,670	— 0.1	11.9	— —	— —	— —
Fayette	12.9	26.8	3,227	0.6	5.8	7,130	— 2.3	—10.9	— —	— —	— —
Forest	20.9	23.7	4,991	0.6	6.2	44,313	—12.5	12.4	173,500	598,000	6,126,800
Greenville	38.0	13.6	36,007	0.1	4.5	237,337	0.5	20.2	— —	— —	— —
Greenwood	— —	— —	23,471	0.1	4.0	132,921	— 3.0	12.5	1,777,331	227,450	634,000
Grenada	— —	— —	13,824	0.7	5.0	71,428	— 4.0	19.2	— —	— —	— —
Gulfport	21.8	15.9	59,654	0.2	4.9	206,155	—10.4	6.1	351,321	— —	514,724
Hattiesburg	11.8	— —	58,131	0.5	5.6	301,445	— 1.6	21.9	1,963,072	2,028,000	1,960,592
Hernando	14.8	— 4.6	6,851	0.9	7.4	22,176	0.1	15.8	420,100	133,500	49,000
Hollandale	19.7	— 2.4	3,254	0.2	6.0	9,071	—11.4	16.1	4,800	2,500	165,650
Holly Springs	27.7	14.7	7,189	—0.1	5.4	31,270	—10.2	10.4	42,000	63,500	— —
Houston	— —	— —	5,531	0.6	6.1	22,997	— 1.8	— 1.2	29,005	1,715,250	216,660
Indianola	25.4	18.6	7,560	0.7	3.5	54,732	1.6	14.7	— —	— —	— —
Iuka	— —	— —	5,230	0.2	11.2	24,823	— 5.8	31.6	— —	— —	— —
Jackson	— —	— —	221,154	0.5	4.2	1,080,655	—11.2	— 3.8	11,115,031	8,384,013	9,763,803
Kosciusko	25.0	30.9	9,435	0.4	3.7	45,055	— 5.1	8.1	110,300	32,800	33,600
Laurel	18.8	— —	33,316	0.3	4.9	204,801	— 4.6	12.4	2,278,022	380,917	660,332
Leland	— —	— —	4,913	0.3	3.1	16,451	1.3	— 1.2	90,800	25,799	42,065
Lexington	— —	— —	4,670	0.0	4.8	16,901	— 2.6	38.2	— —	— —	— —
Louisville	22.2	9.1	10,466	0.2	4.9	43,917	— 6.0	10.0	3,190,300	410,000	456,920
Lucedale	— —	33.4	7,965	1.4	6.3	34,537	34.7	53.5	79,000	212,000	55,000
Lumberton	— —	— —	2,811	—0.2	3.0	7,192	9.6	21.4	— —	— —	— —
Macon	— —	20.2	3,655	0.2	1.9	12,700	— 5.7	— 0.9	— —	— —	— —
Magee	— —	— —	5,196	0.4	6.2	36,304	— 3.9	32.2	— —	— —	— —
Magnolia	20.4	18.8	4,172	0.9	7.8	8,486	—15.2	7.3	11,500	4,300	6,000
Marks	42.9	—	5,378	0.4	3.9	15,266	3.2	15.2	— —	— —	— —
McComb	62.5	48.3	19,329	0.3	5.2	110,997	—10.4	25.1	338,167	261,674	310,925
Meadville	18.4	23.3	— —	— —	— —	4,727	— 9.8	8.8	—0—	—0—	—0—
Mendenhall	— —	— —	6,373	0.4	5.2	19,182	—11.9	10.3	50,200	32,000	55,800
Meridian	— —	— —	47,251	0.5	4.3	300,598	— 8.9	17.1	— —	535,726	1,900,666
Monticello	— —	13.1	4,622	0.5	6.2	15,661	— 4.5	17.1	— —	607,810	13,000
Morton	25.8	50.8	3,426	0.4	6.6	12,544	—54.0	—26.7	— —	— —	— —
Moss Point	— —	— —	16,353	0.6	1.4	40,815	25.0	24.0	640,863	46,600	154,161
Natchez	21.8	34.5	28,665	0.7	5.3	170,906	— 3.3	22.2	254,323	779,136	1,410,314
New Albany	— —	— —	10,935	0.4	— —	44,472	— 7.8	7.1	110,500	375,270	210,500
Newton	17.9	11.2	3,941	—0.7	3.5	18,316	—24.6	— 9.3	74,940	117,968	92,480
Ocean Springs	42.6	—86.7	15,493	0.6	4.1	70,928	36.6	41.0	687,911	179,637	— —
Okolona	10.8	6.2	3,370	1.0	5.5	12,185	— 9.9	6.2	— —	— —	— —
Oxford	— —	— —	21,238	0.7	3.9	78,644	8.3	13.1	1,097,250	323,602	88,300
Pascagoula	— —	— —	33,643	0.0	0.0	190,256	12.3	19.1	1,471,805	1,628,470	312,720
Pass Christian	— —	— —	5,429	0.7	3.9	12,470	16.2	30.7	207,200	126,500	192,644
Philadelphia	— —	— —	11,230	0.7	7.4	66,545	— 2.7	— 2.0	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago	Current Month Oct.	Month Ago	Year Ago
Picayune	——	——	14,763	0.7	7.4	66,545	— 4.0	21.6	394,898	356,712	347,668
Pontotoc	45.6	9.6	9,155	—0.1	5.4	35,461	0.6	19.5	——	——	——
Poplarville	——	——	4,042	0.4	4.5	12,007	9.5	— 6.8	—0—	47,000	8,000
Port Gibson	34.5	41.3	5,623	1.3	11.7	12,906	6.3	11.9	——	——	——
Prentiss	40.7	29.5	——	——	——	18,796	8.0	25.6	15,000	80,000	86,600
Quitman	33.2	55.7	4,783	0.8	6.0	20,393	— 2.3	0.8	——	——	——
Raymond	20.8	33.4	3,116	0.9	8.8	9,255	— 0.5	11.3	——	——	——
Richton	——	——	1,922	1.1	6.2	10,932	31.1	13.4	—0—	——	130,000
Rosedale	30.4	——	1,631	0.8	4.2	5,766	— 8.1	15.0	——	—0—	——
Ruleville	36.6	2.7	1,962	—0.4	2.7	9,562	— 5.3	31.7	800	27,178	15,000
Sardis	——	——	3,438	0.5	4.3	12,544	—21.6	1.7	5,000	—0—	6,000
Senatobia	18.0	12.5	6,629	0.6	6.6	36,687	— 2.5	30.5	97,500	100,000	18,000
Shelby	54.1	— 0.7	1,682	—0.2	2.7	9,097	—17.5	— 4.9	——	——	——
Starkville	——	27.1	24,573	0.3	1.7	77,731	— 0.6	10.2	619,000	223,000	565,000
Summit	——	——	1,581	—1.1	5.7	8,252	— 1.1	10.4	——	——	——
Taylorsville	21.6	13.5	1,747	1.0	3.7	12,605	14.2	25.0	——	——	——
Tchula	——	——	1,992	0.2	4.6	3,350	—27.5	—10.3	——	——	——
Tunica	——	——	4,157	—0.2	3.6	15,985	— 5.1	18.7	——	——	——
Tupelo	27.7	15.7	36,703	0.3	5.1	239,445	— 8.9	9.1	——	——	——
Union	——	——	2,710	0.6	4.9	13,329	—20.7	21.3	——	——	——
Utica	——	——	2,918	0.4	5.6	8,076	— 4.1	17.6	——	——	——
Vicksburg	33.6	31.9	37,841	0.6	4.3	156,289	—17.3	6.4	697,405	2,728,236	1,102,463
Walnut Grove	——	——	1,002	2.0	6.7	1,751	3.2	— 2.7	——	——	——
Water Valley	——	——	3,954	0.8	6.6	19,212	— 7.3	20.8	——	——	——
Waynesboro	30.9	——	7,241	0.6	8.4	58,926	— 7.1	27.2	—0—	40,000	112,700
West Point	35.4	28.3	11,978	0.6	6.3	45,198	1.6	11.1	283,000	1,376,000	294,800
Wiggins	62.3	39.2	6,026	0.8	6.7	19,116	— 5.1	28.6	5,000	——	48,800
Winona	21.4	24.3	4,925	0.5	3.8	28,644	— 4.6	29.0	160,100	36,500	53,000
Yazoo City	39.2	10.8	12,084	0.9	5.3	54,261	—12.1	— 5.9	188,000	169,000	146,500

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	October 1979	September 1979	October 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	147,800	147,400	140,400	0.3	5.3
Unemployed Persons	5,300	5,800	7,500	— 8.6	—29.3
Per Cent of Labor Force	3.6	3.9	5.3	——	——
Employed Persons	142,500	141,600	132,900	0.6	7.2
Non-Ag Wage & Salaried	147,100	146,100	134,750	0.7	9.2
Manufacturing	18,950	18,950	18,850	0.0	0.5
TELEPHONES IN SERVICE	239,934	238,775	230,331	0.5	4.2
CITY SALES TAX COLLECTIONS	1,129,408	1,265,166	1,163,227	—10.7	— 2.9

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	October 1979	September 1979	October 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	59,050	58,950	60,440	0.2	— 2.3
Unemployed Persons	3,620	3,540	4,740	2.3	—23.6
Per Cent of Labor Force	6.1	6.0	7.8	——	——
Employed Persons	55,430	55,410	55,700	0.1	— 0.5
Non-Ag Wage & Salaried	57,770	57,730	58,660	0.1	— 1.5
Manufacturing	8,080	7,730	7,910	4.5	2.1
TELEPHONES IN SERVICE	114,022	109,028	106,179	4.6	7.4
CITY SALES TAX COLLECTIONS	423,433	465,234	353,786	—9.0	19.7

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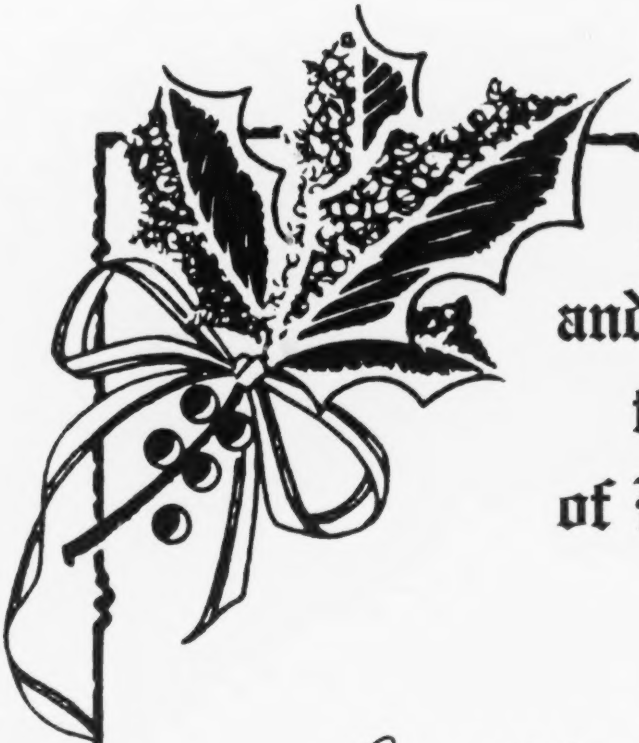

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Leo R. Cheatham is Research Economist with the Division of Business Research at Mississippi State University. He is presently working on a Flood Insurance study for the Water Resources Research Institute.

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James D. McComas, Ph.D.
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Dean, College of Business and Industry

Guy T. Peden, Jr., Ph.D.
Director, Division of Research
Editor, Mississippi Business Review
Editor, Mississippi Statistical Abstract
Professor of Marketing

Robert L. Frnka, Ph.D.
Associate Economist
and Associate Professor of Economics

Leo R. Cheatham, Ph.D.
Associate Economist and
Assistant Professor of Economics

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Secretary

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Inflation Impacts On Interest Rates and Savings

by

Dr. Leo R. Cheatham

The term "inflation" has a very simple definition. One economics text defines it "as a rising general level of prices." Such a definition by no means implies that prices of all goods and services must rise by the same amount. It does not even imply that all prices are rising. In fact one of the major problems of inflation is that prices do rise unevenly thereby redistributing purchasing power among consuming units in the economy.

Rates of inflation reported in annual percentages by the government are composites derived from summaries of price level changes for a broad spectrum of many different types of commodities and services. The most frequently cited source, the U. S. Department of Labor, compiles price index data for both producer prices and consumer prices. Changes in these price indexes provide the "blood pressure" warnings on the inflationary pulse of our economy.

Purchasing Power Erosion

One does not need a degree in economics to realize that purchasing power of the United States dollar has deteriorated in our country and especially in foreign nations. Changes in price level indexes shown in Table 1 reveal that the erosion of the dollar's purchasing power is not a phenomenon that has only recently developed. Data could be extended back to earlier periods in history to show even more dramatic increases. Inflation has been especially obvious during major wartime periods of our country's history. What is new about the present inflation crisis is the high rate. When the consumer price index, shown at 100.7 for 1958 in the table, reached over 200 in 1977, the general price level for items included in the index had doubled. This process took almost 20 years. An item costing $100.70 in 1958 cost $210.10 in 1977. These increases represented an average annual rate of inflation for the period of under 4%.

TABLE 1

Changes in the Consumer Price Index*
1957-1979
[1957 - 59 = 100]

Year	All Items Index	Index Points Change	% Change in Index
1957	98.0	——	——
1958	100.7	2.7	2.8%
1959	101.5	.8	0.8%
1960	103.1	1.6	1.6%
1961	104.2	1.1	1.1%
1962	105.4	1.2	1.2%
1963	106.7	1.3	1.2%
1964	108.1	1.4	1.3%
1965	109.9	1.8	1.7%
1966	113.1	3.2	2.9%
1967	116.3	3.2	2.8%
1968	121.2	4.9	4.2%
1969	127.8	6.6	5.4%
1970	135.3	7.5	5.9%
1971	141.1	5.8	4.3%
1972	145.7	4.6	3.3%
1973	154.8	9.1	6.2%
1974	171.8	17.0	11.0%
1975	187.5	15.7	9.1%
1976	198.3	10.8	5.8%
1977	211.1	12.8	6.5%
1978	227.3	16.3	7.7%
1979 (Est.)	253.2	25.9	11.4%
(1st Quarter)	240.7	5.9	2.5%
(2nd Quarter)	249.0	8.3	3.4%
(3rd Quarter)	257.2	8.2	3.3%
(4th Quarter)	265.7	8.5	3.3%

SOURCE: U. S. Department of Labor

*Index is for the "All Items" category which includes food, durable and non-durable commodities, and services.

At present we are faced with double-digit inflation. Data in Table 2 show how much quicker prices will double at these types of rates.

A continued annual inflation rate of 14-16% would cause prices to double by 1985. If rates of this magnitude were to occur, a home which costs $50,000 to construct in 1980 would cost $100,000 to duplicate in just five years.

Table 2

Years Required For Prices to Double

Single Digit Inflation		Double Digit Inflation	
Inflation Rate	No. of Years	Inflation Rate	No. of Years
2%	34.75	10%	7.26
3%	23.45	12%	6.11
4%	17.67	14%	5.28
6%	11.90	16%	4.65
8%	9.01	18%	4.18
9%	8.04	20%	3.78

History teaches that if pressures of inflation go unchecked "creeping" inflation will beget "galloping" inflation. Data in Table 1 show a "snowball" effect which has progressively worsened over the years. Projections of trends can only produce a pessimistic outlook if drastic steps are not taken by the government.

The Undermining of A Currency

A "good money" serves four basic functions. It provides (1) a unit of value, (2) a medium of exchange, (3) a standard of deferred payments, and (4) a store of value. Quality of a money is judged in terms of how well it serves in these capacities. It does not usually have, nor does it need, intrinsic value. The real value of money is in what it will buy. What it buys is determined by the confidence of sellers that it will perform the four functions listed above.

Money is a mechanism which enabled society to advance past a barter system where goods and services were exchanged directly. Under such a system if you grew tomatoes and wished to swap for potatoes you had to find someone with potatoes who wanted to swap for tomatoes. A medium of exchange such as "money" permits the holder of tomatoes to sell and then purchase from the seller of potatoes who may have no interest in acquiring tomatoes. Commerce as we know it today could not exist without money.

When goods and services are produced in the economy, money incomes are paid to the factors of land, labor, and capital which made the production possible. These incomes provide only the means for determining who gets the fruits of production. The annual total output of goods and services composes the gross national product (GNP). The total quantity of "things" that all consumers are able to acquire is determined by how much is produced in the economy.

Consumers cannot get more by merely receiving higher money incomes. Higher money incomes without increases in output of goods and services simply results in higher prices for the output and consumers are no better off. If one group of wage earners succeeds in getting higher income increases than other groups, they can improve their relative position, but they do so at the expense of other wage earners and factor suppliers who must give up a portion of their share of "things".

GNP can be viewed as a giant pie with money incomes representing tickets issued to consumers entitling them to various size slices of the pie. You can increase the number of tickets, but the consumers as a group are not going to be any better off until the size of the pie is increased. A larger supply of tickets simply means that more tickets will be required to purchase each slice. Any activity of the federal government which results in an increase in the money supply without producing a compensating increase in output of real goods and services adds to inflation.

Spend Now or Spend Later

If a currency fulfills the requirements of a standard for deferred payments and a store of value, income recipients may choose to refrain from consumption in order to have higher levels of consumption at a future date. In other words they may choose to save a portion of earnings rather than spend.If purchasing power of the currency does not change, consumption can take place later since the dollar will buy just as much then as now.

Human nature is such that present consumption is preferable to saving and consuming later. However, there are often reasons why one should and will defer spending for a season. Prudent personal finance calls for setting aside an emergency savings fund to cover expenses such as an unexpected illness, unemployment, destruction of dwelling, etc. Also, since current money incomes are not sufficient to purchase high dollar items such as furniture, autos, houses, etc., money savings provide a means for accumulating purchasing power.

Inflation, however, provides the strongest incentive possible for spending all of current incomes and refraining from saving because it erodes purchasing power. Currency ceases to adequately serve as a standard of deferred payment and as a store of value. Holding currency savings during periods of inflation is like trying to carry sand in a sieve. You start out with a large enough quantity, but the longer you hold it the less you have. If you hold onto the savings long enough purchasing power is all but lost entirely. When inflation rates increase, the effect is like punching larger holes in the sieve. The maximum amount of sand can be carried in a sieve by carrying a short distance and dumping as quickly as possible. During periods of inflation purchasing power is maximized by spending money incomes as quickly as possible after they are received.

The annual inflation rate is the same as the annual growth rate in prices. It is a compound rate. As the data in Table 3 show, prices increase at a geometric rate as the rate rises linearly. With a 2% rate of inflation only $1.81 at the end of 30 years will be necessary to purchase the equivalent of $1 today. On the other hand, with a 15% rate of inflation $66.21 will be necessary to purchase the same as $1 purchases today.

Incentives to Save

In a monetary economy interest rates are determined by supply and demand for loanable funds. Demand is created primarily by business firms wishing to borrow to finance current operations and capital investment and to a lesser extent, by consumers wishing to borrow for major purchases such as homes and autos. In recent years the large deficit financing by the government has made it an important factor determining demand. Supply of loanable funds is primarily a function of the extent to which consumers refrain from spending and deposit savings funds in financial institutions. Commercial banks have the capacity to increase the supply through loan expansion and the Federal Reserve has the power to tighten or loosen the reins on the money supply which also affects the amount of loanable funds, but they are both limited in their efforts by the extent to which savers place deposits in financial institutions. Interest provides the incentive for consumers to delay consumption and make loanable funds available. In general, the higher the interest rate the more people will be willing to save and the larger the supply of loanable funds. Without a supply of loanable funds there can be no lending.

Each individual who receives an income will act in a rational manner when facing the choice of present consumption or savings. He examines all alternatives seeking to maximize his well being and get as much purchasing power from his income as possible. Consequently when considering the possibility of savings, he examines very closely the expected interest rates and the associated risks of different alternatives. For every savings investment opportunity there is a minimum required rate of return for the potential saver which must be realized before he will refrain from current consumption and allow his money to be placed in savings to then be used by someone else. The size of this minimum acceptable rate of return is determined by risk which is in turn defined as the probability that the expected return may not be realized. The higher the risk the higher the required rate of return.

Risk - Return Components

The total rate of return which savers require to induce them to make loanable funds available is the sum of a number of rate premiums to compensate for

TABLE 3

Future Value Required for Equivalent of $1 of Today's Purchasing Power

Annual Inflation Inflation Rate	5 Years	10 Years	20 Years	30 Years	40 Years
2%	$1.10	$1.22	$ 1.49	$ 1.81	$ 2.21
4%	1.22	1.48	2.19	3.24	4.80
6%	1.34	1.79	3.21	5.74	10.28
8%	1.47	2.16	4.66	10.00	21.72
10%	1.61	2.59	6.73	17.45	45.26
12%	1.76	3.11	9.64	29.96	93.05
14%	1.95	3.71	13.74	50.95	188.88
16%	2.10	4.41	19.46	85.85	378.72
18%	2.29	5.23	27.39	143.37	750.37
20%	2.48	6.19	38.34	237.37	1469.70

various types of risk. The following is a list and description of some of the more significant components:

1. **Riskless rate of return** is the rate often referred to as "pure interest." It is determined nationwide by supply and demand forces and is the very minimum paid on funds where there is no risk. For lack of a better standard, rates on U.S. Government securities are often used as an estimate of this rate.
2. **Business risk** is the inherent risk due to the nature of the use of the borrowed funds. In the case of a financial institution the degree of this risk is determined by the financial soundness of the firm, the type of customer market, and lending practices. In industrial firms it is determined primarily by the nature of the line of business. The higher this type of risk, the larger the premium required by the investor.
3. **Interest rate risk** is the risk that market rates of interest will increase while funds are committed at a fixed rate for a period of time. If savings are invested at 8% for one year and interest rates rise to 12% shortly afterward, an earning opportunity is lost. Interest rate risk increases with the length of time savings are committed. A 20-year corporate bond has a much higher degree of interest rate risk than a 1-year certificate of deposit. As market rates increase, market prices on outstanding bonds decline. To induce savers to invest long term requires that borrowers offer higher rates of interest to compensate for interest rate risk.
4. **Financial structure risk** is risk attributed to the manner in which a firm's assets are financed. Financial leverage is measured by a ratio of debt-to-equity financing - with risk increasing as the ratio rises. An equity base is viewed as a safety cushion by the investors. The larger the percentage of assets financed by this source the less danger of a firm being unable to pay interest expenses during periods of reduced cash inflows. Naturally the financial structure of a savings institution differs dramatically from that of an industrial firm. However, there is less financial structure risk in a financial institution with a sizeable equity base than one with minimal equity.
5. **Inflation rate risk** is the risk that inflation will occur and that the expected rate of return will not be sufficient to cover loss of purchasing power plus the other returns required to compensate for the various types of risk components.

Each of the above risk considerations affect rates of returns required to induce savers to make loanable funds available. Below is a sample illustration showing how much interest rates must increase on government securities for savers to maintain constant returns during a period of 14% annual inflation:

The 14% premium for inflation risk is equal to the expected rate of inflation and is the percentage that is estimated to be necessary to maintain the purchasing power value of the principal. Inflation also increases the interest rate risk. Figures shown represent rates of returns necessary on government securities which tend to be the lowest rates in the economy because of zero business risk. Other rates should be even higher. In order to realize any net return on investment, the return to the savers must be higher than the rate of inflation. With a 14% rate of inflation a 14% rate of return is required to prevent loss in value of principal.

Today's Low Interest Rates

It is quite obvious that interest rates on government securities and other rates in the economy have not risen to levels suggested by the preceeding example. The current Treasury Bill rates of around 10% are far below what is required for a net 4% realized return. However, it is equally apparent that debtors benefit from inflation at the expense of savers. In the early 1900's Irving Fisher in **The Theory of Interest** observed that when price levels rise, the rate of interest rises "nominally" only slightly but "really" falls greatly. Prevailing rates have risen but "real" interest has fallen. As long as the inflation rate is higher than interest rates, savers not only do not earn any "real" interest; they lose part of their principal.

With interest rates below inflation rates a paradox exists in that borrowers not only do not have to pay any "real" interest; they do not even have to pay back the full value of the principal. If $1000 can be borrowed at 12% for one year when the inflation rate is 14%, the $1200 when repaid will only buy what $982.50 will buy when the $1000 was borrowed. This situation is very conducive to increased spending in the economy at a time when less spending is needed to reduce inflation pressures.

The Government and Interest Rates

Many business firms are realizing that loanable funds are a bargain even though rates may appear to be high. Anticipating continued inflation they perceive any loan with a rate equivalent to the inflation rate as interest free. However, as the spread between rates savers require and the lower actual rates paid continue, the supply of loanable funds will begin to dwindle. In 1979 the Federal Reserve Board of Governors took the first step towards cooling the fires of inflation by implementing a tight money policy designed to raise interest rates and reduce current spending and consumption. So far this is the only action taken by any governmental body or agency to combat inflation.

The Administration and Congress need a course in economics to understand that a cutback in consumer spending occurs when incentives are provided; not when consumers are penalized for saving. If a saver is fortunate enough to find an investment which will pay interest that is equal to the current rate of inflation he will discover that the yield is still not adequate to reduce loss of purchasing power because income taxes must be paid on the interest. With an annual inflation rate of 14%, the percentage rate of interest required to prevent loss of purchasing power for a person in a 25% tax bracket is computed as follows:

$1000 Invested Principal
x 114% Increase in Prices
$1140 Equivalent Principal in 1 yr.

$$\frac{\$140 \text{ Net Interest Required}}{75\% \text{ Portion after Taxes}} = \$187 \text{ Gross Interest}$$

$187 - $47 (Taxes) = $140 Net Interest

$$\text{Required return} = \frac{\$187}{\$1000} = 18.7\% \text{ Rate of Interest}$$

Annual interest of 18.7% is required to produce a 14% rate of return to keep up with a 14% rate of inflation. Note that this return does not yield any "real" interest. It only prevents loss of value of principal. For persons in higher tax brackets an even higher rate is necessary to prevent loss.

Income tax regulations further stimulate spending by allowing interest expenses to be deducted when computing taxes. Under current economic conditions the advantage is swayed even more in favor of the borrower. This provision can only stimulate spending.

Presently there are about 34 states, including Mississippi, which have fixed interest rate ceilings on loans. In a few states ceilings apply to all types of loans; in others they are selective with some types being exempt. Ceilings range from 8% in some states to as high as 21% in others. The purpose of such laws is to keep lenders from overcharging unwary borrowers. The result is that interest rates may be kept low, but a scarcity of loanable funds develops when market rates exceed ceiling rates. As long as ceiling rates exceed market rates the laws have no effect. When market rates pass ceiling rates the supply of loanable funds dries up in those sectors affected by the ceiling due to savers investing in markets where they are paid higher interest. Artificial regulation of rates simply reduces supply of loanable funds.

In 1776 Adam Smith noted the effect of usury laws in **The Wealth of Nations**. Smith favored low ceilings on interest rates because he thought they would eliminate the long-term mortgage market, and capital would be put to more productive usage in short-term loans thereby creating more industry. He was certainly more knowledgeable of the effect since he was expecting funds to dry up in certain types of loan markets.

The federal government further aggravates interest rate markets by providing large amounts of low cost loanable funds through a number of its programs. In any federal program where funds are available at rates below prevailing market rates, the funds are providing a restricting effect on market rates, the funds are providing a restricting effect on rates. Taxpayers are paying the difference when the government borrows at 10% and lends money through various agencies at 5%.

Summary & Conclusion

High interest rates are a result of inflation; they are not a cause. If they rise high enough that can become a partial cure. True to the observation of Irving Fisher, Eugene Von Bohm-Bawerk, and other economists of the late nineteenth and early twentieth century, money interest rates have been rising during the current period of inflation, but "real" interest

U. S. Government Securities

	0% Inflation		14% Inflation	
	3 Month Treasury Bills	10 Yrs. Bonds	3 Month Treasury Bills	10 Yrs. Bonds
Riskless rate	4%	4%	4%	4%
Business risk	0%	0%	0%	0%
Interest rate risk	0%	3%	0%	6%
Inflation risk	0%	0%	14%	14%
Total required risk	4%	7%	18%	24%

rates have declined. Many current market rates are even less than annual rates of inflation. Consequently, spending in the private sector will continue at high levels and probably increase if this situation does not change and the government continues to provide incentives to spend while simultaneously taxing those who save.

If governments would realize that interest rates are simply prices paid for capital and allow prices to be set by supply of and demand for loanable funds, shortages could be eliminated. While allowing interest rates to seek market equilibrium without governmental interference could not completely eliminate inflation, it would provide a stimulus for borrowers to cut back on spending. The present status is harmful to long range capital formation; and if trends continue there will be shortages in many sectors because recipients of income are not being induced to provide the necessary monetary savings which command the tangible savings in factors of productions.

Everyone who has retired or knows of someone trying to live off retirement savings is fully aware of one of the most harmful effects of inflation. They see the value of hard earned savings eroding daily. Anyone else who ever plans to retire or who purchases a life insurance policy to protect a beneficiary had better become concerned with stopping inflation or at least slowing it down. If a 15% rate of inflation were to prevail over the next 30 years, a $100,000 life insurance policy purchased today would buy the equivalent of what could be purchased with $1510 today. In 40 years the equivalent would be $373. A sum of $100,000 invested in a retirement fund today which earns 8% interest would be worth $15,197 in today's value by the end of 30 years and worth only $8,110 by the end of 40 years. Even an inflation rate of 9% can wreck havoc with long term savings. A $100,000 insurance policy will provide purchasing power equivalent to only $7,537 of today's purchasing power by the end of 30 years.

Problems created for retirement programs alone are enough to cause inflation to merit a number one priority rating with the Administration. Some very positive steps must be taken. The public is too wise to listen to any talk about voluntary saving when the government is doing everything possible to discourage savings. Elimination of income taxes on interest earned on personal savings accounts would be a very effective step in encouraging savings. This would compliment a much needed reduction in government spending which is one of the major contributing factors to present inflation problems. A major portion of this type of spending provides consumer incomes without adding any real consumable output of goods and services to GNP. High levels of non-productive government spending may have at least been tolerable in the past because the artificial incomes generated were used to purchase portions of the growth which was occurring in output from the private sector. With a slowdown in productivity and in GNP growth, such expenditures will become even more inflationary.

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NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Houston	
Phillips Construction Co.	
Asphalt	10
EXPANDED	
Baldwayn	
Blue Bell, Inc.	
Apparel	30

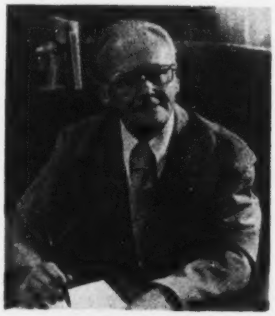
INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	November 1979	October 1979	November 1978
Retail Sales	179.0	173.8	218.1
Electric Sales	198.9	195.7	222.8
Telephones in Service	220.0	219.3	210.0
Gasoline Gallonage	137.1	142.8	156.8
Loans of Savings & Loan Institutions	275.0	254.2	416.8

The Dean's Corner

Mark the end of a decade and perhaps an era!

We heaved a great sigh of relief with the passing of the agonized 60's (it seems only yesterday) with their distasteful memories of the egocentric and willful acts of many of our young people who have come to be known as the "me" generation. Many rebelled against the old values of work, morals and religion and legitimate families. Most have since become decent citizens, but a few have never matured and have been unwilling to give up the limelight associated with making spectacles of themselves in foolish demonstrations and other acts of immature and churlish conduct. All in all we were happy to face the challenges of the 70's, and put the unfortunate decade of the 60's behind us, or, at least, at the time most thought of it as an unfortunate decade in the life of the nation.



Then came the brave new world of the 70's. During this decade a number of developments, most of which were not anticipated, influenced rather significantly life in this nation.

Watergate, with all of its implications, descended upon us with very demoralizing effects. Who would have dreamed that a President could be run out of office for lying to protect his helpers guilty of stealing information from the other political party? Politicians rose up in righteous indignation over this "heinous" act—many of the same ones who later somehow squelched the investigation into their taking funds from a wealthy Korean for political favors.

The decade also witnessed an honest, dedicated man become President, at a time when the morale of the nation was at an extremely low ebb, and bring order of the situation. During his administration was fairly well contained, and other contributions were made by him—only to be turned aside by a fickle and ungrateful electorate.

During the decade the problem of inflation increased, with rising crescendo during the latter part of the decade. The "credibility" of the dollar has suffered immensely, in spite of the fact that at the beginning of the decade it was **the** world currency. It now has about the same attraction as dead fish. In 1973 the remaining provisions not already repealed of the Gold Reserve Act of 1934 were set aside, with the resulting loss of standing of the dollar. In February of 1973 the official U.S. price of gold was raised to $42.20, thus reducing the content below the 50% permissible under the Act of 1934. The next month the U.S. ceased to redeem dollars in gold when presented by foreign governments and central banks, another requirement under the Gold Reserve Act of 1934. Earlier, in 1966, the Federal Reserve banks (as the result of an Act of Congress) were no longer required to maintain a 25% gold certificate reserve against member bank deposits. In 1968, Congress passed legislation removing the requirement that Federal Reserve notes must have a 25% gold certificate backing.

Since these events, the dollar has been under constant attack internationally because of our proclivity to live beyond our means and go in debt to foreigners. Playing Santa Claus to a good part of the rest of the world has not helped the situation, and the peculiar way which the recipients of our benevolence have chosen to display their appreciation has been a constant source of dismay.

This devastating inflation (perhaps the one single development most associated with the decade) has largely resulted from the cowardly way Congress has chosen to redistribute wealth and irresponsibly spend without having the courage to increase taxes. Inflation is, of course, an insidious and cowardly form of taxation, and benefits no one. In the long run those most vulnerable to rising prices, the retired and poor, of course, suffer most. Those who diligently put aside retirement funds, have in effect seen these confiscated by an irresponsible federal government.

Contributing to the problem of inflation and expediting the demise of our exhalted position as the leader among industrial nations, is the rapidly deteriorating level of productivity in this nation. An array of the leading industrial nations with respect to gains in productivity would place the U.S. near the bottom. In Germany this year, the rate of increase is 5 **times** that in this country. Unless the raw power of certain monopolistic labor unions is curbed, the U.S. will cease to be included among the rank of leading industrial nations. The unions should be subject to the Clayton Act and other anti-trust regulations, the same as business and financial firms. A good illustrative case is the current problems with the Chrysler Company, which finds itself in financial difficulty, in part because of excessive and seemingly unreal demands in recent years by the automotive workers' union. Now the Company expects to be bailed out in some fashion by the tax payers. Originally, the administration required some sort of concessions by the overpaid work force (overpaid in the minds of many). When it was announced that the union was demanding a 30% increase package over the next three years (clearly in violation of the President's guide lines) the first reaction by the price "czar" was that the government would not even consider a "bail out" under these conditions. This was the correct response. However, in two or three days a cabinet member indicated that these unreal demands by the union would not necessarily preclude the "bail out", but that the workers would have to make some sacrifice. Sacrifice indeed! What about the sacrifice the stockholders have been required to make? Incidentally, where monopolistic unions exist there have been a number of violations of the President's guide lines on wages, such as in the trucking industry, the garment industry, airlines, rubber industry and electrical equipment. For the year the **average** increase in wages will be about 10%, the president's guide line being 7%.

Another development occurring during the late 70's was the decline in the rate of saving by Americans. Saving is necessary in order to provide capital funds for industry to keep up with capital goods requirements (we have failed to do this). This lack of saving (excessive spending) has also contributed heavily to inflation. The saving rate currently is around 5% only, as compared with 7½% a couple of years ago, and with a much higher level in nearly all the leading nations. This year the savings rate in France is about 17%, in England 14%, and Italy around 25%, as compared with our meager 5%. (**Wall Street Journal**, Oct. 5, 1979)

Another development which has occurred during the decade (especially in recent years) has been the efforts to weaken the structure of our financial institutions by the process of homogenation, that is, by making them all alike. The introduction of NOW accounts, share transfers by credit unions, the payment of interest on demand deposits by permitting automatic transfer from savings to checking accounts, **et cetera**, will seriously weaken banks and savings and loan associations. Our disastrous experience with the banking system during the early thirties dictated legislation (such as the Banking Acts of 1933 and 1935) to protect the banks from cut-throat competition. It was and still is in the interest of the public to maintain a strong banking system. We have seen the results of not doing so. However, it would appear that certain members of both the Senate and the House are diligently striving for legislation that would make a shambles out of a system of financial institutions which even without these efforts to weaken it has not been noted for its strength in this country. Although progress has been made in recent years, and will continue in the future, if Congress will refrain from muddying the water.

The decade also witnessed further encroachments by an unbridled Federal bureaucracy, and a continuation of bizarre court decisions, which gave further impetus to the fears of the dictatorship of the judiciary. A recent decision by a Federal judge relative to the deportation of illegal aliens illustrates this. Mexican workers without proper papers are constantly being deported but to deport Iranians here illegally is discriminatory according to the strange logic of the judge involved.

Next to the problem of double-digit inflation, perhaps the thing which will be most remembered about the decade of the 70's will be our disenchantment with the automobile. Instead of being the joy of our lives, it has become the bane of our existence. Long lines at gas pumps and a quadrupling of prices were bad enough. But the arrogance of third rate (or lower) nations under whose sands lakes of oil lie because of an accident of nature was even more difficult to take. The merciless extortion in the forms of higher and higher and higher prices for this oil (which they did not produce) was enough to threaten the survival of more advanced nations. How well we remember the years after World War II when the United States fed, clothed and provided capital equipment to much of the remaining world without the immoral escalation of prices characteristic of OPEC. And these were goods and services which we produced, not just pumped out of the ground with the aid of technology and capital supplied by others (mainly the U.S.). We have seen some of the very nations most assisted turn on us and treat us like an alley cat sadistically teasing an old and blind dog.

The decade (especially toward the end) witnessed numerous cowardly and beastly acts of seedy throw backs to the jungle, all in the name of some dubious "cause". We have seen the rise of several flea bag Hitler immitators such as Idi Amin (for some reason the letters ot are omitted from his first name) and now that senile old dictator Ko "meany" whose acts in the name of religion are inconceivably inhumane. After all, civilization supposedly has progressed beyond such bestial cruelties. And, of course, here in America there was the infamous "preacher", named Jones, who led his followers to mass suicide in South America, when he discovered that his rotten game was up.

Such a decade! And yet we in America, on balance, have never had it so good. Most people who want to work and are capable of doing so have jobs. While our living standards are beginning to erode (or require two incomes to maintain them), there is little deprivation. Minority groups are making remarkable progress in catching up, when individual members are willing to make the necessary efforts to do so. Black graduates of colleges are being actively sought after, and salaries are at least commensurate with white graduates. There may even be a tendency toward returning to those values which made this a great society.

But what lies ahead for the next decade into which we are entering with such little fanfare? The writer is not much of a soothsayer, but here is the sooth in part, if not the whole sooth.

It seems inevitable that we must stop talking and get underway with crash programs to solve our energy problems. Progress and even survival will depend upon this. It would appear likely that OPEC nations will mature sufficiently later in the decade to stop their harsh and immature treatment of the rest of the world. If not, it almost goes without saying that they will have to be brought to heel, either through economic or military means.

Meanwhile, we shall probably get over our childish and neurotic fears of nuclear energy, and greatly expand its use. More people are maimed and killed each year by automobiles than would ever be killed or injured through nuclear power plants. Yet, few people have demonstrated to close down our streets and highways. In fact, probably more people have been injured or killed in providing other energy sources (mining, drilling, processing, transporting, etc.) than has been associated with nuclear energy. However, that fringe group which protests nuclear energy, the disturbing of snail darters, and for five years held up the Alaskan pipeline are not receptive to logic, and we shall simply have to learn to ignore them. This will involve bringing some sanity back into our judicial system (incidentally, the time may just be ripe for this, in any case). As, Thomas A. Murphy, President of General Motors, recently stated, almost everything could go wrong seemed to do so at the Three Mile Island incident. Yet, in spite of this, the redundant safety systems prevented any injuries. Nevertheless, the unreasoning critics of nuclear energy experienced a heyday and "made more capital out of that incident than the industry's defenders." (a monograph by Mr. Murphy entitled, **Is America Ready for the Eighties?**)

Former Secretary of Energy, Schlesinger, recently stated that, "Quite bluntly, unless we achieve the greater use of coal and nuclear power over the next decade, this society may just not make it." (Nov. 79, **Perspectives on National Issues,** N.A.M.). But for most of the decade we shall simply have to struggle with those fossil fuels (petroleum and gas) which unbelievably stupid government policies have locked us in.

During the decade ahead we shall awaken from our sheherazadean dreams of unlimited goodies for all, and be forced to come to grips with reality. As James L. Ferguson, Chairman of the Board and Chief Executive Officer of General Foods, stated in a speech at the annual stockholders meeting this past summer, "We have to accept that we now live in a world of limited resources and, in some cases, scaled-down expectations." It would seem more accurate to state that our expectation level must be scaled down in **all cases**. This nation is clearly now tottering on the brink of economic disaster in terms of its future economic well being. The only salvation is for all of us to tighten our belts and become less profligate. The old fashion virtues of thrift and hard work must simply be quickly reaffired to avert this disaster. We must save more in order to curb inflation as well as to provide capital to rebuild our deteriorating capital goods. We have been living for too long now on the efforts and accomplishments of those who proceded us; it is through the consumption of the capital that they stored up for us that we have been able to continue for a couple of decades this profligate life of ours. In short, we have been consuming our seed corn.

To replenish these squandered capital resources and to keep abreast during the next decade the amount of savings needed is staggering. "During the next decade, U.S. businesses will require some $5 trillion in new capital for new plant construction, new jobs and increased productivity." (Senator Gaylord Nelson, as quoted in **Perspective on National Issues**, N.A.M., Sept. 79). This will mean that Congress will definitely need to balance the budget and stop robbing the capital funds market of from $50-100 billion each year to finance irresponsible deficits. In order to encourage saving, Congress will have to pass tax incentives, such as exempting interest income on savings as other nations are doing. Our present tax laws encourage spending (interest payments on loans being tax exempt) and discourage savings (interest income being taxable).

In the decade ahead, labor unions will also likely be brought under control. The public will demand that they cease to hold hostage the American consumer. From a position of weakness in the 1920's, the pendulum has definitely swung too far in the direction of raw strength, which unions use to rip off their fellow Americans without shame. Using the excuse of inflation (which they in large measure brought on as the result of their wage demands which have far outstretched productivity) only the changing of the calendar is needed to increase their exhorbitant demands. Many union contracts have wage escalation clauses to insure their members of increased wages on an automatic basis with increases in the cost of living (not so with most Americans), but **in addition** to this they demand and receive from an all too willing management wage increases in no way related to productivity, as stated earlier. This will likely change during the next decade, provided we can send to Congress some more members with a little more courage and integrity. The avariciousness and greed of organized labor has caused almost every President in recent years to loose its support, as Presidents have tried to urge on the unions a little more reasonable attitude and a little less rapacious marauding. Common workers are not entitled to $115 a day and 5 weeks paid vacation and Brobdignagian fringe benefits just because they belong to a monopolistic union. Wage increases should be limited to increases in productivity except in those areas where inequities exist.

During the decade ahead it is possible that at long last we shall redefine the proper role of government. In the process those millions of drones with their snoots in the federal trough must be put to work in order to increase production. They are currently consuming, but not producing, and a good part of the activity of these bureaucrats is actually harmful to the economy. Government deficits must be eliminated, and in all likelihood tax paying citizens will mandate it or else rebel. Currently, these deficits are not only the main cause of our wild inflation, but the financing of these deficits in the capital funds market has driven interest rates to an unbelievable level.

It is to be fervently hoped that in the next decade this nation can define anew its proper goals and objectives—that we can become unified in a concensus that will hold us together in the pursuit of these objectives. It is also devoutly to be wished that we can now cast aside this crippling malaise that has gripped us and the debilitating cynicism that has fallen upon us. And let us all pray that the golden age for America is just over the horizon and not down the road over which we have already traveled. Perhaps, we can learn from the mistakes which we have been making regularly of late. Wolfe's Law states: "Those who don't study the past will repeat its errors. Those who do study it will find other ways to err." And as we cope with those problems which weigh so heavily upon us, let us somehow keep our sense of humor.

Meanwhile, the writer of this column wishes all who read it a happy new year and a rewarding new decade.

Gaines M. Rogers, Dean

NTC Says, Limit Spending

The National Taxpayers Conference (NTC), in a recently released policy statement, called for early enactment of a statutory limit on Federal spending growth. Such a limit, says the NTC, could lead to a balanced Federal budget in the near future without resort to "widespread elimination or cut-backs in existing federal programs."

The National Taxpayers Conference is an alliance of 29 state taxpayer organizations which seeks to facilitate the exchange of information and coordination of problems of common concern. The proposal was contained in a policy statement prepared by an NTC committee set up last April to review major pending taxing/spending limitation proposals and their implications.

In an analysis of Federal fiscal trends over the past 20 years, the report points out that: "The federal budget has been in balance only twice during the past two decades." An accumulated national debt approaching the one trillion dollar mark is projected by fiscal year 1982.

The statement reviews various approaches to limiting Federal spending, including a study of existing budgetary processes, a tax limitation, a balanced budget amendment, a spending limitation amendment, and a statutory limitation. The committee concludes that "a statutory spending limitation appears preferable" and further outlines the components which should characterize an effective spending limit.

"Too often in the past," the NTC statement says, "both the Congress and the President have advocated spending restraint but have not practiced it. If the growth in federal spending is to be controlled, therefore, a formal legal restraint is needed."

The NTC policy statement advocates adoption of an amendment to the Congressional Budget Act of 1974 to tie annual Federal outlays to a percentage of the Gross National Product (GNP). The proposal would reduce Federal outlays from 21 percent of GNP in fiscal year 1980 to 19.5 percent in fiscal 1983, which would then become the permanent mandated limit on spending by the Federal government.

(Continued Page 14)

WVU Publishes Business and Economic Bibliography

The Bureau of Business Research at West Virginia University recently announced the publication of the 1979 **AUBER Bibliography**. An excellent reference source for anyone interested in the fields of business and economics, the **Bibliography** contains over 2,200 publications such as books, articles, and monographs from more than 100 college and university research organizations across the U. S. Listing publications produced during the 1978 calendar year, Volume XXIII cites works from institutions of higher education in both the Association for University Business and Economic Research (AUBER) and the American Assembly of Collegiate Schools of Business.

Researchers and other users will find the **AUBER Bibliography** covering more than 125 subjects, with the largest number of entries in such categories as business and public administration, marketing and advertising, regional economics, industry studies, and financial markets.

According to its editors, Stanley J. Kloc and Joan Vannorsdall Schroeder, the 286-page **Bibliography** offers potential users two distinct advantages: a large number of listings, such as working papers, not available in other more traditional indexes; and an efficient subject classification system which was adapted from the American Economic Association's **Journal of Economic Literature**. In addition to subject categorization, the **Bibliography's** listings are also arranged by institution and author.

Each year, the **Bibliography** is distributed to nearly 500 colleges and universities across the U.S. and internationally. In addition, more than 200 business firms and government agencies regularly order copies of the book.

The **AUBER Bibliography: 1978 Publications** is available from the University Bookstore for $12.50 per copy. Limited quantities of the **Bibliography** for previous years are available as well. For the first time past issues are also obtainable in microfilm from Microforms International Marketing Corporation, Elmsford, New York.

Lighter Tax Load Possible As Work Force Increases ?

The load may be lighter for tomorrow's taxpayers, if Tax Foundation analysis of population projections works out. A slow-down in the birth rate and a decrease in the growth rate of the elderly population are foreseen at about the same time as the majority of the post-World War II baby boom move through the work force. This translates into more workers supporting non-workers than at any time in recent history.

This relief is embodied in a statistical concept known as the "societal dependency ratio," the ratio between those aged 18-to-64 and those above or below this age group. While not all persons in the 18-to-64 age group are in the labor force, and some persons younger or older do work, nevertheless, the years 18 through 64 can be considered fairly accurate boundaries of the population of potential working age.

In 1950, the ratio of the number of persons aged 65 years or older per hundred persons aged 18 through 64 was 13.3. By 1978, this ratio had risen to 18.3. By 1995, there will be 20.5 persons aged 65 and over for every 100 persons between 18 and 64. There will be growth in this part of the dependency ratio, Tax Foundation economists say, but it will be slower; and this will help the taxpayer.

In addition, the burden will be eased somewhat by slower growth in another "dependent" age group—children through age 17, who make up the majority of public school enrollees, and younger children who demand care in the home. The post-war baby boom increased this group by more than 50 percent during the decade of the fifties. In the sixties, however, the rise was only 8 percent; and the seventies are expected to show a decline of 11 percent.

Granted that any projections based on fertility rates are chancy, medium-range projections suggest that the number of persons aged 17 and under will grow somewhat less rapidly than the population of potential working age. This "dependency ratio"—involving those younger than the 18 through 64 age group—peaked at 65.7 per 100 persons in the middle 1960s. By 1978, the ratio had dropped to 49.7. The Census Bureau's mid-range projections show a further decline to 43.5 in 1985 and 1990.

The over-all dependency ratio—children age 17 and under plus persons aged 65 and over per 100 of "working age" population—will decline somewhat from a 1978 level of 68.0 (83.1 in 1965) to between 62.5 and 65.2, according to projections for the next twenty years.

All of this spells possible relief for tomorrow's taxpayer. The table below and the one at the bottom of page 16 give detailed data for "dependent" and "working" populations for selected years.

Monthly Tax Features, Tax Foundation, Inc., Volume 23, Number 10, November-December 1979.

Persons in "Dependency" age groups per 100 persons aged 18-64 years.

	"Dependency" ratio*		
	Total	Age 17 and under	Age 65 and over
Actual:			
1950	64.4	51.1	13.3
1955	73.4	58.3	15.2
1960	81.6	64.9	16.8
1965	83.1	65.7	17.4
1970	78.0	60.6	17.5
1975	71.0	53.1	17.9
1978	68.0	49.7	18.3
Projected:			
1980	64.3	45.8	18.4
1985	62.5	43.5	19.1
1990	63.5	43.5	20.0
1995	65.2	44.7	20.5
2000	63.2	43.2	19.9

*Age groups indicated per 100 persons aged 18 through 64, generally the potential working age group.

Source: U.S. Department of Commerce and Tax Foundation computations.

(Continued from Page 13)

The committee stated that its proposal, if adopted, could produce surpluses by 1981 or 1982. These could be used, the policy statement notes, to reduce the national debt or to underwrite tax reductions.

Monthly Tax Features, Tax Foundation, Inc., Volume 23, Number 10, November-December 1979.

Gov't Programs Reflect Changes In Population

As the Department of Commerce gears up to launch its careful 1980 scrutiny of the population of the United States and its diverse characteristics, Tax Foundation analysts were prompted to reflect on past population trends and some of their implications for government programs.

Government has grown relative to the private sector over the past three decades, and the causes of much of that growth are numerous and complex. Not to be ignored among these forces, however, are changes in the age distribution of the population.

To wit: from 1950 to 1978 the number of persons aged 65 and over, together with the number of persons of school and college age (5 to 24 years) increased by more than 42 million, or 72 percent. Population in the remaining ages rose by only 24 million, or 26 percent.

The 65-and-over age group gained 12 million persons, or a 94 percent increase. For the school-age group, the rise was 31 million, or 66 percent.

These two age groups traditionally are major beneficiaries of government programs, and the record reveals that U.S. government units have apparently responded generously to the perceived needs of the elderly and school-age groups.

Special programs for these two groups have accounted for over 40 percent of the 11-fold rise in total Federal (nondefense), state, and local spending since 1950. Expenditures under major programs for the elderly were 47 times as large in 1978 as in 1950, and spending for local schools and higher education was 15 times as high. For all other nondefense programs combined, outlays were only 8.5 times their 1950 level.

Viewed in another way, spending for major programs for the elderly comprised 5.7 percent of all government spending for nondefense purposes in 1950 (when the population aged 65 and over represented 8.1 percent of the total), and 23.3 percent of spending in 1978 (when the population aged 65 and over had increased to 11 percent of the total).

Adjusted for inflation, the costs of the programs for the elderly rose by annual rates of 14.7 percent in the fifties, 9.3 percent in the sixties, and 8.8 percent in the seventies to date.

The largest increases in educational costs came in the fifties, when the inflation-adjusted annual rate of increase was 8.0 percent. From 1970 to 1978 the annual increase, on this basis, was 2.6 percent.

Total government spending for all other (nondefense) government programs rose far less rapidly than the costs of programs for the elderly or public education from 1950 to 1970. However, these costs have risen faster than educational outlays since 1970.

The accompanying table here and the tables on page 16 provide more details concerning these trends.

Monthly Tax Features, Tax Foundation, Inc., Volume 23, Number 10, November-December 1979.

Government Expenditures under Major Programs for the Elderly and School-Age Population in Relation to Total Employment

Fiscal year	Expenditures per employed person			
	Programs for the elderly	Programs for school-ages	Programs for elderly and school-ages	All government programs
	In current dollars			
1950	$ 54	$ 116	$ 170	$1,161
1960	226	269	495	2,215
1970	587	616	1,203	4,070
1978	1,583	1,069	2,652	7,873
	In constant 1978 dollars			
1950	$ 146	$ 314	$ 460	$3,146
1960	498	593	1,090	4,879
1970	987	1,035	2,022	6,840
1978	1,583	1,069	2,652	7,873

Source: Basic data from accompanying tables: U.S. Department of Labor, Bureau of Labor Statistics; and Tax Foundation publications.

Expenditures under Major Government Programs for the Elderly and School-Age Population

[Millions]

Program	1950	1960	1970	1978
Major programs for the elderly total	$3,263	$15,435	$48,062	$152,743
Old age and survivors insurance (OASI)	727	10,270	26,267	78,524
Railroad Retirement[A]	298	942	1,756	4,021
Public employee retirement				
Federal civil service	184	804	2,797	10,899
Other	600	1,793	6,369	21,027[B]
Supplemental security income	——	——	——	6,552
Old age assistance (cash payments)	1,454	1,626	1,866	——
Hospital and medical insurance	——	——	7,099	24,940
Medicaid	——	——	1,908[A]	6,780[B]
Public education, total[C]	$7,013	$18,368	$50,385	$103,100[B]
Local schools	5,906	15,166	37,461	74,900[B]
Higher education	1,107	3,202	12,924	28,200[B]

[A] Includes disability payments.

[B] Estimated by Tax Foundation.

[C] Local public schools and institutions of higher education only.

Source: U.S. Department of Health, Education, and Welfare; U.S. Department of Commerce; and Tax Foundation estimates.

Population Trends and Projections, by Selected Age Groups Selected Years, 1950-2000

Year	Primarily working age [18-64]	"Dependency" ages: Total	17 and under	65 and over	School age* [5-24]
	Number [millions]				
Actual:					
1950	92.6	59.7	47.3	12.4	46.9
1955	95.7	70.3	55.7	14.5	52.1
1960	99.5	81.2	64.5	16.7	60.3
1965	106.1	88.2	69.7	18.5	70.2
1970	115.1	89.8	69.7	20.1	77.2
1975	124.9	88.7	66.3	22.4	78.0
1978	131.1	89.7	65.2	24.1	77.7
Projected:					
1980	135.3	86.9	62.0	24.9	75.4
1985	143.3	89.6	62.3	27.3	71.3
1990	148.9	94.6	64.8	29.8	70.5
1995	153.0	99.8	68.4	31.4	72.8
2000	159.6	100.8	69.0	31.8	75.8
	Percent change over previous period				
1950-1960	+ 7.5	+36.0	+52.5	+34.7	+28.6
1960-1970	+15.7	+10.6	+8.1	+20.4	+28.0
1970-1980	+17.5	− 3.2	−11.0	+23.9	− 2.3
1980-1990	+10.1	+ 8.9	+ 4.5	+19.7	− 6.5
1990-2000	+ 7.2	+ 6.6	+ 6.5	+ 6.7	+ 7.5

Note: Details may not add to totals shown because of rounding.

*Elementary and secondary school and college age population.

Source: U. S. Department of Commerce, Bureau of the Census; and Tax Foundation Computations.

STATE ECONOMIC INDICATORS

Indicator	November 1979	October 1979	November 1978	Per Cent Change	
				One Month Ago	One Year Ago
EMPLOYMENT, EARNINGS AND HOURS [1]					
Total Employment (000's)	978,000	996,200	969,700	− 1.8	0.9
Non-Ag Employment	836,700	838,900	805,700	− 0.2	3.9
Mining	9,400	9,500	8,100	− 1.1	16.0
Contract Construction	48,300	49,900	42,900	− 3.2	12.6
Manufacturing	231,200	233,500	234,600	− 1.0	− 1.4
Transportation and Public Utilities	41,300	41,200	38,400	0.2	7.6
Wholesale and Retail Trade	166,100	164,700	159,600	0.9	4.1
Finance, Insurance and Real Estate	32,200	32,200	31,500	0.0	2.2
Service	121,000	120,800	117,400	0.2	3.1
Government	187,400	187,200	173,000	0.1	8.3
Unemployment Rate (Per Cent Labor Force)	5.9	5.3	6.4	——	——
Average Weekly Earnings	203.81	202.51	189.14	0.6	0.5
Average Hourly Earnings	5.07	5.05	4.67	0.4	8.6
Average Weekly Hours in Manufacturing	40.2	40.1	40.5	0.2	− 0.7
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.) [2]	3,128	3,158	3,329	−0.9	−6.0
Gasoline delivered to Dealers (gals.) [3]	135,069	112,306	128,802	20.3	4.9
Dairy Production					
Milk (lbs.) [4]	60,000	63,000	61,000	− 4.8	− 1.6
Egg Production [4]	130,000	136,000	138,000	− 4.4	− 5.8
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations [5]	32,700	31,768	40,600	2.9	−19.5
Construction Loans	3,600	3,561	2,500	1.1	44.0
Bank Loans [6]					
Bank Deposits [6]					
Time Deposits [6]					
Demand Deposits [6]					
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH) [7]	1,641,847	1,630,445	1,824,683	0.7	−10.0
Telephones in Service [8]	1,459,424	1,454,624	1,392,742	0.3	4.8
AGRICULTURE (000's) [9]					
Total Cash Receipts from Farm Marketings	118,747	106,473	121,932	11.5	− 2.6
Cash Receipts from Marketing Livestock	90,987	84,758	86,703	7.3	4.9
Cash Receipts from Marketing Crops	27,760	21,715	35,229	27.8	−21.2
RETAIL SALES TAX COLLECTIONS [10]	1,316,741	1,199,838	1,341,685	9.7	− 1.9

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[1] Mississippi Employment Security Commission
[2] State Oil and Gas Board for August
[3] Mississippi Motor Vehicle Comptroller
[4] Mississippi Crop and Livestock Reporting Service
[5] Federal Home Loan Bank of Little Rock
[6] Because of the lack of comparability, this series is being suspended.
[7] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority
[8] South Central Bell Telephone Company
[9] U.S. Department of Agriculture—Estimated for September
[10] Mississippi State Tax Commission

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago
Aberdeen	2.9	10.9	8,018	0.4	5.7	40,791	— 0.2	17.2	10,942	425,400	100,350
Baldwyn	0.2	2.4	4,598	0.7	6.4	17,593	— 2.5	— 3.1	——	——	——
Batesville	——	——	8,449	0.6	5.4	48,015	3.1	71.5	530,400	604,300	59,420
Bay Springs	——	——	——	——	——	19,699	— 9.5	21.9	——	——	——
Bay St. Louis	——	——	12,970	0.6	9.7	33,095	92.7	55.7	114,400	231,625	222,300
Belmont	10.4	23.6	2,192	0.0	5.6	9,496	11.4	14.7	——	——	——
Belzoni	——	——	4,738	0.0	5.4	26,609	11.7	18.6	32,892	——	——
Biloxi	——	——	44,451	0.2	0.8	199,789	— 2.5	11.8	2,278,213	2,696,238	580,360
Brandon	——	——	11,207	0.5	1.3	28,339	2.8	46.0	1,903,000	233,000	681,362
Brookhaven	——	——	15,848	0.5	3.1	96,562	3.8	23.7	——	——	188,950
Brooksville	— 6.8	—13.5	1,322	0.8	9.3	2,489	—25.3	— 5.6	——	——	——
Canton	——	——	10,567	0.3	5.5	60,110	6.5	22.8	——	——	22,600
Carthage	— 4.3	2.7	7,283	0.3	6.6	31,934	— 1.1	18.4	3,500	1,224,500	192,600
Charleston	0.7	— 2.9	4,029	0.0	4.2	17,187	0.5	26.5	——	——	——
Clarksdale	——	14.7	20,494	0.1	4.4	104,253	— 2.1	15.5	1,620,755	374,424	238,145
Cleveland	5.2	8.6	13,947	0.0	3.1	88,284	— 1.2	22.8	——	——	373,764
Collins	—14.7	7.8	4,551	0.3	5.7	46,656	128.5	85.7	——	——	——
Columbia	——	——	15,395	0.2	5.6	67,502	9.8	39.1	——	——	——
Columbus	— 4.7	57.7	33,373	0.2	4.3	199,403	4.0	30.5	275,577	675,501	450,293
Corinth	——	— 0.5	20,234	0.2	5.7	102,723	— 3.6	18.1	105,170	298,785	——
Crystal Springs	——	——	5,809	0.4	5.5	19,435	—22.3	— 4.7	80,800	3,400	64,500
Drew	——	——	2,650	0.1	2.6	12,859	9.5	1.5	——	71,000	95,000
Edwards	——	——	1,589	—0.2	5.6	4,473	16.0	28.2	——	——	——
Ellisville	——	—30.9	3,787	0.3	7.8	12,760	—32.2	57.9	——	——	——
Eupora	— 5.9	—15.4	4,325	0.9	6.1	16,471	5.1	59.0	——	——	——
Fayette	—16.6	2.6	3,244	0.5	7.0	8,110	13.7	43.3	——	——	——
Forest	— 3.6	26.1	5,004	0.3	6.4	56,388	27.2	93.6	——	173,500	145,700
Greenville	28.3	45.5	36,247	0.7	4.7	237,705	0.2	27.4	——	——	——
Greenwood	——	——	23,497	0.1	3.6	149,347	12.4	27.6	315,400	1,777,331	65,000
Grenada	——	——	13,915	0.7	5.1	73,665	3.1	25.7	——	——	68,600
Gulfport	— 7.1	16.0	59,705	0.1	4.9	256,869	24.6	38.6	514,465	351,321	554,267
Hattiesburg	— 6.4	26.4	58,488	0.6	6.1	327,537	8.7	32.7	1,062,148	1,963,072	365,600
Hernando	1.1	9.5	6,870	0.3	6.5	21,952	— 1.0	44.4	12,625	420,100	173,890
Hollandale	33.9	18.0	3,280	0.8	6.1	12,677	39.8	28.8	——	4,800	84,683
Holly Springs	—11.8	——	7,233	0.6	5.5	34,995	11.9	38.5	81,000	42,000	——
Houston	——	——	5,550	0.3	6.3	24,484	6.5	8.8	5,000	29,005	58,000
Indianola	1.9	8.6	7,581	0.3	3.7	65,633	19.9	84.6	——	——	——
Iuka	——	——	5,245	0.3	10.4	25,426	2.4	39.9	——	——	——
Jackson	——	14.7	221,475	0.1	4.2	1,328,221	22.9	17.8	3,603,906	11,115,031	9,169,319
Kosciusko	—13.1	6.7	9,472	0.4	4.1	51,266	13.8	35.0	179,000	110,300	205,500
Laurel	— 0.5	25.0	33,435	0.4	4.8	225,059	9.9	38.3	1,197,338	2,278,022	376,278
Leland	——	——	4,937	0.5	3.5	19,046	15.8	25.8	422,200	90,800	120,400
Lexington	——	——	4,714	0.9	5.5	18,549	9.8	28.9	——	——	——
Louisville	— 2.5	34.0	10,485	0.2	4.7	48,549	10.5	42.8	89,500	3,190,300	205,140
Lucedale	——	——	7,993	0.4	3.6	36,205	4.8	55.1	—0—	79,000	18,850
Lumberton	——	——	2,834	0.8	2.2	7,086	— 1.5	19.7	——	——	——
Macon	— 1.6	15.1	3,671	0.4	1.4	18,328	44.3	50.2	——	——	——
Magee	——	——	5,184	—0.2	5.8	34,016	— 6.3	23.2	——	——	——
Magnolia	— 1.6	—32.4	4,180	0.2	7.0	8,811	3.8	17.1	9,800	11,500	3,200
Marks	7.0	7.6	5,389	0.2	4.3	17,326	13.5	47.9	——	——	——
McComb	——	——	19,423	0.5	5.4	101,826	— 8.3	25.3	274,925	338,167	1,005,400
Meadville	— 2.9	26.5	——	——	——	5,139	8.7	25.2	—0—	—0—	—0—
Mendenhall	——	——	6,398	0.4	5.5	20,645	7.6	34.6	5,000	50,200	2,000
Meridian	——	——	4,722	0.4	4.5	324,660	8.0	31.8	1,690,479	1,843,518	1,108,266
Monticello	— 4.1	12.7	4,672	1.1	6.8	17,887	14.2	34.1	6,000	78,000	29,180
Morton	—15.7	33.3	3,417	—0.3	6.1	20,288	61.7	28.7	——	——	——
Moss Point	——	23.9	16,503	0.9	2.2	41,821	2.5	29.3	332,111	640,863	87,628
Natchez	— 5.3	24.4	28,778	0.4	5.5	187,935	10.0	38.2	209,000	254,323	354,794
New Albany	——	——	10,983	0.4	——	47,417	6.6	19.9	127,938	110,500	129,300
Newton	——	——	4,026	2.2	5.1	22,681	23.8	49.4	31,750	74,940	62,000
Ocean Springs	— 3.0	52.3	15,535	0.3	3.9	67,366	— 5.0	31.0	174,135	687,911	367,116
Okolona	— 5.3	— 7.8	3,392	0.7	5.1	15,403	26.4	70.6	——	——	——
Oxford	——	——	21,231	0.0	3.4	80,487	2.3	42.6	57,000	1,097,250	1,688,100
Pascagoula	——	——	33,748	0.3	0.0	217,877	14.5	52.5	625,879	1,471,805	317,375
Pass Christian	——	——	5,445	0.3	3.7	10,365	—16.9	33.7	9,200	207,200	36,975
Philadelphia	——	—11.1	11,278	0.4	5.9	51,674	27.2	28.6	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago	Current Month November	Month Ago	Year Ago
Picayune	——	——	14,819	0.4	6.8	63,506	— 4.6	17.1	——	394,898	97,855
Pontotoc	3.0	16.0	9,173	0.2	5.1	36,423	2.7	23.1	——	——	——
Poplarville	——	——	4,045	0.1	4.0	13,084	9.0	17.1	35,000	—0—	63,500
Port Gibson	— 9.9	19.1	5,669	0.8	11.2	12,316	— 4.6	23.6	——	——	——
Prentiss	11.0	56.9	4,297	0.6	5.7	18,059	— 3.9	27.4	10,000	15,000	400
Quitman	—24.5	22.3	4,780	—0.1	4.9	23,643	15.9	37.0	——	——	——
Raymond	—17.4	23.4	3,123	0.2	8.8	9,421	1.8	30.4	——	——	——
Richton	——	——	1,926	0.2	6.2	9,619	—12.0	18.5	44,620	—0—	——
Rosedale	——	——	1,640	0.6	5.4	6,341	10.0	10.1	——	—0—	130,415
Ruleville	40.2	9.1	1,964	0.1	2.4	10,993	15.0	39.2	113,300	800	52,803
Sardis	——	——	3,468	0.9	4.4	15,564	24.1	66.7	307,000	5,000	2,000
Senatobia	— 0.6	1.7	6,656	0.4	6.5	36,614	— 0.2	23.1	68,000	97,500	78,000
Shelby	11.3	15.5	1,690	0.5	3.8	10,544	5.1	5.1	——	——	——
Starkville	—16.6	24.1	24,645	0.3	4.0	85,345	9.8	29.6	336,000	619,000	528,000
Summit	——	——	1,587	0.4	4.8	8,352	1.2	34.3	——	——	——
Taylorsville	— 1.3	20.5	1,749	0.1	4.5	11,276	—10.5	19.5	——	35,000	——
Tchula	——	——	2,006	0.7	4.8	5,128	0.5	15.1	—0—	—0—	—0—
Tunica	——	——	4,183	0.6	3.9	17,188	7.5	33.5	——	——	——
Tupelo	—13.6	3.0	36,909	0.6	5.3	253,961	6.1	17.4	——	——	——
Union	——	7.8	2,705	—0.2	4.3	15,027	12.7	26.8	——	——	——
Utica	——	——	2,948	1.0	6.1	6,334	—21.6	1.2	——	——	——
Vicksburg	——	——	37,881	0.1	4.0	193,945	24.1	41.1	175,683	697,405	50,341
Walnut Grove	——	——	1,016	1.4	6.7	1,628	— 7.0	24.1	——	——	——
Water Valley	——	——	3,935	—0.5	4.9	19,569	1.9	14.8	38,520	49,450	96,900
Waynesboro	——	——	7,302	0.8	9.1	59,259	0.6	58.2	59,000	—0—	650,000
West Point	— 9.9	18.9	12,009	0.3	6.1	47,830	5.8	17.3	1,107,000	283,000	642,538
Wiggins	——	——	6,062	0.6	7.0	22,559	18.0	60.7	——	5,000	65,000
Winona	—17.0	—11.3	4,935	0.2	4.0	29,612	3.4	44.3	67,500	160,100	45,500
Yazoo City	——	——	12,071	—0.1	4.9	60,124	10.8	12.6	——	188,000	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	November 1979	October 1979	November 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	146,100	147,800	141,000	—1.2	3.6
Unemployed Persons	5,000	5,300	6,700	5.7	—25.4
Per Cent of Labor Force	3.4	3.6	4.8	——	——
Employed Persons	141,100	142,500	134,300	1.0	5.1
Non-Ag Wage & Salaried	146,900	147,100	135,300	—0.1	8.6
Manufacturing	19,000	18,950	18,700	0.3	1.6
TELEPHONES IN SERVICE	240,342	239,934	230,755	0.2	4.2
CITY SALES TAX COLLECTIONS	1,376,788	1,129,408	1,163,504	21.9	18.3

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	November 1979	October 1979	November 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	58,000	59,050	60,730	—1.8	— 4.5
Unemployed Persons	3,680	3,620	4,130	1.7	—10.9
Per Cent of Labor Force	6.3	6.1	6.8	——	——
Employed Persons	54,320	55,430	56,600	—2.0	— 4.0
Non-Ag Wage & Salaried	56,980	57,770	57,670	—1.4	— 1.2
Manufacturing	7,850	8,080	8,020	—2.8	2.1
TELEPHONES IN SERVICE	114,233	114,022	106,291	0.2	7.5
CITY SALES TAX COLLECTIONS	467,525	423,433	371,716	10.4	25.8

Population by County in Mississippi

Source: Bureau of the Census, U. S. Department of Commerce and the Department of Sociology, Mississippi State University. Percentage computed by the Division of Business Research, College of Business and Industry, Mississippi State University.

County	1977	% of State	% Change	1978	% of State	% Change
Adams	37,600	1.6	—0.5	38,100	1.6	1.3
Alcorn	29,900	1.3	5.7	30,700	1.3	2.7
Amite	12,900	0.5	—0.8	13,200	0.5	2.3
Attala	19,300	0.8	4.3	19,200	0.8	—0.5
Benton	7,800	0.3	1.3	8,100	0.3	3.8
Bolivar	47,200	2.0	0.0	46,800	1.9	—0.8
Calhoun	15,300	0.6	0.7	15,200	0.6	—0.7
Carroll	9,100	0.4	0.0	9,000	0.4	—1.1
Chickasaw	17,400	0.7	0.6	17,600	0.7	1.2
Choctaw	9,100	0.4	2.2	9,300	0.4	2.2
Claiborne	11,100	0.5	—0.9	11,200	0.5	0.9
Clarke	16,000	0.7	3.2	16,200	0.7	1.3
Clay	20,200	0.8	1.0	20,700	0.9	2.5
Coahoma	37,800	1.6	—2.1	38,600	1.6	2.1
Copiah	25,700	1.1	3.2	26,300	1.1	2.3
Covington	15,300	0.6	3.4	14,900	0.6	—2.6
DeSoto	50,400	2.2	3.8	52,000	2.2	3.2
Forrest	63,200	2.6	1.3	63,300	2.6	0.2
Franklin	8,300	0.3	1.2	8,400	0.3	1.2
George	14,700	0.6	2.8	15,000	0.6	2.0
Greene	9,000	0.4	4.7	9,200	0.4	2.2
Grenada	19,800	0.8	1.0	20,700	0.9	4.5
Hancock	19,400	0.8	1.6	19,600	0.8	1.0
Harrison	147,100	6.2	1.2	147,700	6.1	0.4
Hinds	236,600	9.9	2.2	236,300	9.8	—0.1
Holmes	22,500	0.9	2.3	22,100	0.9	—1.8
Humphreys	13,800	0.6	—2.8	14,200	0.6	2.9
Issaquena	2,500	0.1	8.7	2,500	0.1	0.0
Itawamba	17,600	0.7	1.1	18,400	0.8	4.5
Jackson	113,200	4.7	4.5	117,800	4.9	4.1
Jasper	16,500	0.7	0.6	16,900	0.7	2.4
Jefferson	9,100	0.4	3.4	9,500	0.4	4.4
Jeff Davis	13,200	0.6	1.5	13,000	0.5	—1.5
Jones	59,100	2.5	—0.3	59,900	2.5	1.4
Kemper	11,100	0.5	9.9	10,100	0.4	—9.0
Lafayette	27,700	1.2	4.5	28,400	1.2	2.5
Lamar	19,500	0.8	4.3	19,200	0.8	—1.5
Lauderdale	71,500	3.0	0.3	69,700	2.9	—2.5
Lawrence	11,900	0.5	0.0	11,800	0.5	—0.8
Leake	18,200	0.8	1.1	17,400	0.7	—4.4
Lee	53,200	2.2	2.9	53,200	2.2	0.0
LeFlore	41,400	1.7	0.2	41,300	1.7	—0.2
Lincoln	27,10[illegible]	1.1	[illegible]5	2[illegible]00	1.1	—0.4
Lowndes	54,400	2.3	1.9	54,700	2.3	0.6
Madison	33,700	1.4	2.4	34,800	1.4	3.3
Marion	24,200	1.0	0.4	24,400	1.0	0.8
Marshall	26,700	1.1	—0.7	26,800	1.1	0.4
Monroe	35,200	1.5	3.2	34,900	1.5	—0.9
Montgomery	13,200	0.6	1.5	13,000	0.5	—1.5
Neshoba	21,900	0.9	0.9	21,600	0.9	—1.4
Newton	18,800	0.8	—3.1	19,500	0.8	3.7
Noxubee	13,100	0.5	0.0	13,100	0.5	0.0
Oktibbeha	33,200	1.4	0.6	33,800	1.4	1.8
Panola	28,400	1.2	3.3	28,500	1.2	0.4
Pearl River	29,100	1.2	3.2	29,600	1.2	1.7
Percy	9,800	0.4	—2.0	10,200	0.4	4.1
Pike	35,600	1.5	4.7	35,300	1.5	—0.8
Pontotoc	19,300	0.8	1.6	19,500	0.8	1.0
Prentiss	21,600	0.9	0.5	21,200	0.9	—1.9
Quitman	14,200	0.6	1.4	14,000	0.6	—1.4
Rankin	59,200	2.5	—1.2	62,400	2.6	5.4
Scott	22,600	0.9	1.3	22,400	0.9	—0.9
Sharkey	8,600	0.4	13.2	8,600	0.4	0.0
Simpson	21,500	0.9	3.9	20,900	0.9	—2.8
Smith	14,100	0.6	—5.4	14,700	0.6	4.3
Stone	8,600	0.4	3.6	8,300	0.3	—3.5
Sunflower	34,900	1.5	—1.1	35,400	1.5	1.4
Tallahatchie	18,200	0.8	1.1	17,800	0.7	—2.2
Tate	20,200	0.8	0.0	21,100	0.9	4.5
Tippah	18,700	0.8	3.9	18,000	0.7	—3.7
Tishomingo	16,500	0.7	3.1	16,400	0.7	—0.6
Tunica	10,500	0.4	—2.8	10,200	0.4	—2.9
Union	21,100	0.9	2.9	21,100	0.9	0.0
Walthall	13,300	0.6	3.9	13,400	0.6	0.8
Warren	49,900	2.1	1.6	49,600	2.1	0.6
Washington	72,400	3.0	1.5	70,700	2.9	—2.3
Wayne	17,900	0.7	1.7	18,600	0.8	3.9
Webster	10,000	0.4	0.0	10,400	0.4	4.0
Wilkinson	10,100	0.4	0.0	10,400	0.4	3.0
Winston	18,900	0.8	—1.6	19,400	0.8	2.6
Yalobusha	12,100	0.5	0.0	12,300	0.5	1.7
Yazoo	26,800	1.1	—2.5	27,200	1.1	1.5
State Total	2,389,000		1.5	2,404,000		0.6

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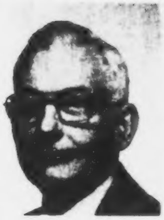

HACKAMACK

SCHLALLER

Dr. Lawrence C. Hackamack

Dr. Hackamack received his doctorate at the State University, Iowa City, Iowa. He is a Professor of Management at Northern Illinois University and has been active in research in metalworking, metal forming and metal joining machine tools.

Robert L. Schaller

Robert L. Schaller is presently Director of Consulting Services at Sundstrand Advanced Technology Group. He received a B.M.E. at Syracuse University.

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Dean, College of Business and Industry

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Editor, Mississippi Business Review
Editor, Mississippi Statistical Abstract
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and Associate Professor of Economics

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Measuring A Merger

by

Dr. Robert L. Schaller and
Dr. Laurance C. Hackamack

Recent studies of many Fortune 500 companies show that we are in the era that some have called "mergermania" where the problem of deciding whether or not a company is really worth the money required to be purchased is critical. With the low rate of our productivity increase of 1967-1977, an average of over 1.5% below the rate of almost every other industrialized country, one must decide if a company can meet the future needs of production.[1]

When looking for candidates for possible merger, acquisition or retention, a process for measuring the basic ability to produce with the machinery and equipment presently on hand is a necessary requirement. Very often the financial analysis and the market potential of the products are the critical elements in a decision process, and of course, these are not to be ignored, but we must also consider strongly the management policies of the candidate company in regard to machine and equipment replacement. A couple of these strategies that may have been followed could have been:

1. The action of holding a high level of return on investment before using any capital for machinery and for equipment. (By not using dollars for investment in machinery the profit picture can be over-stated.)
2. Enforcing the policy of not buying new machinery or equipment unless the following occurred, which effectively slows replacement.
    a. The need exists for new product innovation or production.
    b. The current capacity cannot meet demand expected.
    c. The present machinery or equipment cannot be used to produce current products. It is estimated that 5 to 10% of the machinery is not used in many companies.

Thus, we can see that many ways decisions of management make it possible for poor replacement of machinery (not buying new or used machinery as technology changes); which, in turn, may not appear on the balance sheet or in general information about the company.

How can accurate information be obtained about a company? The following are some techniques which are commonly used:

1. The most accurate way to secure the exact **market value** of the company is by using a qualified machine appraiser. This is an expensive and time-consuming process at best. Again, the market value (see Appendix) and the estimated replacement cost value are only indications and do not reveal any indication of the capability of the company to produce or how productive the machinery and equipment actually is.
2. A way of measurement of machine capacity is to use the produced items versus the capital invested in machinery and equipment. This method does not tell what the level (comparison of present equipment to new) could be or whether the machinery and equipment is of modern vintage.
3. Another possible indication is the amount of capital investment spent over the last ten years. Why ten years? If a consistent pattern of high capital investment has not been practiced and if the amount has not increased rapidly (due to inflation) over ten years or more, the age of machinery and equipment will be well over 18 years on the average. This is supported by industry information that over ⅔'s of our machinery is well over 10 years of age currently.

All of these methods require some ability to gain the needed input or information about the company that may be nonexistent.

Therefore, an examination of the process to measure the present and future productivity capacity of the candidate company is needed. Since little time is usually available to evaluate the candidate company's competitive position, various methods have been used by manufacturing team members, all of which fall short of any kind of professional approach. This may cause the acquisition team to recommend an acquisition which has little chance of success. Whether the acquisition is operated "in place" (operated as is with present products) or "folded in" (become part of the major unit), the manufacturing portion of the decision to acquire is substantially based on the answers to the following questions:

1. Is the equipment worth its Book Value?
2. Can it produce a competitive product?

With inflationary trends as they are, the Book Value (see Appendix) of the assets are usually understated and can be readily evaluated against equipment prices on the used market (see Appendix). However, the question of producing competitively introduces a factor of judgement, which should be something more than a "gut feel;" therefore, seasoned members of acquisition teams have been looking for the best method of evaluating data, thereby achieving high creditability in making their recommendations. This method shows considerable promise.

The basic data required from the Candidate for analysis are a list of the assets, year of manufacture, year of purchase, the shift usage (see Appendix), and visual condition code. If the Candidate cannot supply the condition code, a trip through the Candidate's facility by a qualified manufacturing member of the acquisition team can provide an estimate of the average operating condition of the equipment, which for this model ranges from 1.0 to 10.0. The following table shows a typical example.

TABLE I—CONDITION CODE (C.C.)

Productivity level compared to a new or rebuilt machine of same vintage.

C.C.		Overhaul when equipment incapable of holding
10.0	new machine	
9.5	machine rebuilt to original specs	
8.5		*.0002"
8.0	rebuild close tolerance machines (grinders)*	*.003"
7.5		
7.0	rebuild medium tolerance machines (lathes)*	
6.5 to 1.0	rebuild or scrap depending on year of manufacture or condition to which it can be restored.	

*Load shifts of closer tolerance work to other machines can usually be made. (Reassignment of parts to better machines)

Knowing the type of industry being evaluated, a rather accurate way of forecasting the competitiveness of the equipment being acquired is possible. Thus, the first consideration should be the type of product being manufactured, and the following categories are suggested.

Category A - Product requiring heavy stock removal - broad tolerances

Category B - Product requiring little stock removal - close tolerances

Category C - Product requiring medium stock removal - medium tolerances

The reason for these categories will become more evident as subsequent information is presented, but at this point it can be assumed, for example, that grinders (see Appendix) with a condition code of less than 7.5 are unlikely to be competitive on close tolerance work.

The productivity of a machine in any future time period can be predicted if the features and specifications at the time of manufacture are known, its operation condition relative to a totally rebuilt machine is accurately assessed, and its projected shift usage is forecasted.

Since 1958, Dr. Lawrence Hackamack of Northern Illinois University and Computerized Machine Tool Replacement Service, DeKalb, Illinois, has pioneered the field for evaluating machinery productivity, the result being the availability of computerized data going back as far as 1940. The algorithms (see Appendix) for some 53 types of metalworking equipment and four plastic types and their related data have already been inputed and are being tracked each year, resulting in a concept known as "The Productivity Criteria Quotient" (PCQ) theory, and its ratio derivative "Productivity Increase Ratio" (PIR), (See Appendix A and B). At this point it is well to note that Sundstrand was well into its own analysis in 1975 when Hackamack's work was suggested as a valuable reference by a New England machine tool manufacturer. An in-depth analysis of his work was made and his data accepted with very minor exceptions.

With computer analysis inputs it is possible to assess the Candidate's current and projected competitive position. However, because of the need to avoid public disclosure usually involved in evaluations of this nature, the manufacturing member can manually, using the Hackamack tables*, apply the condition codes and one other factor, thereby producing data which is reasonably accurate. This last factor concerns the degradation of productivity in future time periods due to usage and is shown in the following graphs. Where large amounts of equipment are involved, they may be grouped and averaged as to year and condition code, thereby reducing the number of calculations.

---

*Since Dr. Hackamack is a partner in Computerized Machine Tool Replacement Service, the confidentiality of company input information is also assured.

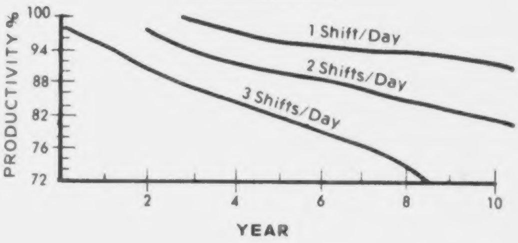
All the ingredients are now available for analysis, namely:

1. The Asset List, Year of Manufacture, Condition Code.
2. Current competitive position by using Hackamack Data. (Sample - Appendix B) and Table I, page 4.
3. Future competitive position by using the graphs.

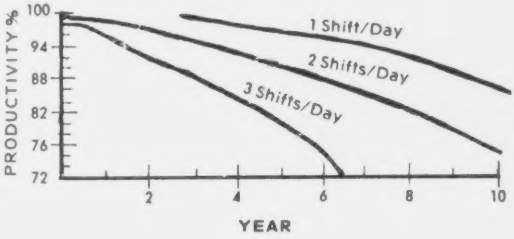
Therefore, a simple evaluation of six major categories of equipment might be shown as follows for a Category B industry. Assume the year of the study to be 1977.

CLOSE TOLERANCE-LIGHT STOCK REMOVAL

NEW EQUIPMENT



USED EQUIPMENT



ASSET LIST

	Qty.	Mach. Code (1)	Description	Year of Mfg.	Cond. Code	Shift Usage
A	1	GC	B&S #2 O.D. Grinder	1965	7.5	2
B	2	GC	B&S #2 O.D. Grinders	1970	8.0	2
C	4	NC	Sundstrand OM-2	1968	9.7	3
D	2	VH	W&S #2A Turret Lathes	1965	6.0	2
E	3	GH	Pfauter Hobs	1968	8.0	2
F	3	GC	Heald I.D. Grind 1316R	1974	6.0	2
G	1	VL	Bullard 36VT	1938	5.0	1

(1) Hackamack Coding System

1977 CURRENT COMPETITIVE POSITION DUE TO MACHINE OBSOLESCENCE

	Quan.	Mach. Code	Machine Description	P.I.R. Change (2)*	Usage/ Year	Opportunity Hrs. Lost
A	1	GC	#2 B&S - O. D. Grinder	0.03	3,000	90
B	2	GC	#2 B&S - O. D. Grinders	0.01	6,000	60
C	4	NC	Sundstrand OM2	0.25 (3)*	18,000	4,500
D	2	VH	W & S 2A T. Lathe	0.03	6,000	180
E	3	GH	Pfauter Hobs	0.02	9,000	180
F	3	GC	Heald I.D. Grinder	0.04	6,000	240
G	1	VL	Bullard 36V	0.36	1,500	540
					49,500	5,790

* (2) From Hackamack Tables
* (3) From Sundstrand Tables

1977 COMPETITIVE POSITION DUE TO SHIFT USAGE (CONDITION CODE)

	Quan.	Mach. Code	Machine Description	C.D. (4)* Factor	Usage/ Year	Opportunity Hrs. Lost
A	1	GC	#2 B&S - O. D. Grinder	0.25	3,000	750
B	2	GC	#2 B&S - O. D. Grinders	0.20	6,000	1,200
C	4	NC	Sundstrand OM-2	0.03	18,000	540
D	2	VH	W & S 2A Turret Lathe	0.40	6,000	2,400
E	3	GH	Pfauter Hobs	0.20	9,000	1,800
F	3	GC	Heald I.D. Grinder	0.20	6,000	1,200
G	1	VL	Bullard 36V	0.50	1,500	750
					49,500	8,640

*(4) C.D. Factor = 1.00 - Condition Code x 0.10 = Degradation Factor

SUMMARIZING 1977 MACHINERY COMPETITIVE POSITION

$$\frac{49{,}500-8{,}6400-5{,}790}{49{,}500} \times 100 = 70\%$$

PROJECTING FUTURE YEARS COMPETITIVE POSITION

	Shift Use	1977	Condition Code Factors 1978	1979	Projected (3) 1980	1981	1982	1983
A 1 - B&S #2 O.D. Grinder	2	0.75	0.99	0.97	0.95	0.93	0.91	0.88
B 2 - B&S #2 O.D. Grinders	2	0.80	0.99	0.97	0.95	0.93	0.91	0.88
C 4 - Sund OM2 N.C.	3	0.97	0.94	0.90	0.84	0.78	0.98(1)	0.95
D 2 W&S #2A Turret Lathes	2	0.60	0.99(1)	0.97	0.95	0.93	0.91	0.88
E 3 - Pfauter Hobs	2	0.80	0.78	0.99(1)	0.97	0.95	0.93	0.91
F 3 - Heald I.D. Grinder	2	0.80	0.78	0.99(1)	0.97	0.95	0.93	0.91
G 1 - Bullard 36VT	1	0.50(2)	0.96	0.94	0.92	0.90	0.88	0.86

(1) Rebuild required - Productivity Factor Too Low
Allows capital projections for rebuilding in proper year

(2) Reprocess to other equipment or rebuild (assumes rebuild)

(3) c_F = Condition Code x 0.10

SUMMARIZING CONDITION CODE EFFECT IN FUTURE YEARS

	Quan. Shifts	c_F Factor	1977	1978	1979	1980	1981	1982	1983
A	1 x 2 x	0.75	1.50	1.98	1.94	1.90	1.86	1.82	1.76
B	2 x 2 x	0.80	3.20	3.96	3.88	3.80	3.72	3.64	3.52
C	4 x 3 x	0.97	11.64	11.28	10.80	10.08	9.36	11.76	11.40
D	2 x 2 x	0.60	2.40	3.96	3.88	3.80	3.72	3.64	3.52
E	3 x 2 x	0.80	4.80	4.68	5.94	5.82	5.70	5.58	5.46
F	3 x 2 x	0.80	4.80	4.68	5.94	5.82	5.70	5.58	5.46
G	1 x 1 x	0.50	0.50	0.96	0.94	0.92	0.90	0.88	0.86
			28.84	31.50	33.32	32.14	30.96	32.90	31.98
Competitive Ratio to 1977			1.00	1.09	1.15	1.11	1.07	1.14	1.10

SUMMARIZING PROJECTED FUTURE COMPETITIVE POSITION

Using Ratios and 1977 Base of 70%

1977	1978	1979	1980	1981	1982	1983
70%	76.3	80.5	77.7	74.9	79.8	77.0

The above method of analysis is the outgrowth of similar data used for a number of years in Sundstrand Aviation's Asset Management and Long Range capital Planning functions. This analysis can also be used for assessing vendor capabilities (where a supplier is measured to determine if capable) and a derivative can be used to support data given to the Security and Exchange Commission (SEC) relative to the current replacement cost of productive equipment. The algorithm for assessment is shown as follows:

Estimated replacement cost of candidate equipment

$$\frac{C_F \times C_A \times I_F}{P_F} = \text{Replacement Cost*}$$

P_F = P.I.R. Factor from year of manufacture
C_A = Cost of Equipment - Year manufactured
I_F = Inflation Factor from year of manufacture
—Bureau of Labor Statistics
C_F = Condition Code Factor

*No firm should have a general plan which replaces equipment on a "one-to-one" basis. The majority of the machines being replaced today have productivity increases of 25% or more; otherwise, capital is invested elsewhere.

TYPICAL EXAMPLE OF ESTIMATING COST CANDIDATE - ESTIMATED REPLACEMENT COST/SEC REPORTING

Year	Machine	Units x	P_F x	Cost-Year of Mfg. x	I_F	Replacement Cost
1965	B&S #2 O.D. Grinder	1 x	0.73 x	49,000	x 2.16	77.3
1970	B&S #2 O.D. Grinder	2 x	0.80 x	61,400	x 1.72	169.0
1968	Sundstrand OM2	4 x	0.77 x	202,000	x 1.90	1,182.0
1965	W/S - 2A T. Lathe	2 x	0.58 x	58,000	x 2.16	145.3
1968	Pfauter Hobs	3 x	0.78 x	39,000	x 1.90	173.4
1974	Heald I.D. Grinder	3 x	0.77 x	72,000	x 1.35	224.5
1938	Bullard V.T.	1 x	0.74 x	17,000	x 4.4	55.4
	Total Estimated Replacement Cost					$2,026.9K

CONCLUSIONS

This logical procedure of macro analysis of a Candidate company's present and projected competitive position has substance and creditability to help acquisition team members avoid gross errors in their recommendations. Once the basic process is understood, graphs and tables can be modified to suit any particular set of circumstances. Should time and conditions permit, the easiest assessment is through the use of the computer, which can provide additional analytical data as well.

APPENDIX A

To help better understand the details of the Productivity Criteria Quotient (PCQ) and Productivity Increase Ratio (PIR) theory, some historical data might be useful. Early in 1958, the manufacturing management of General Electric's Ordnance Department in Pittsfield, Massachusetts retained Dr. Lawrence Hackamack to study whether there was a pattern to machine tool modernization programs. What evolved through this and subsequent efforts was the PCQ rating system which indicates the changing pattern of development in each type of machine tool studied.

Dr. and Mrs. Hackamack directed their efforts to categorizing all the elements which increase productivity due to design changes and elements of degradation which decrease productivity. Through the use of various algorithms and using industry inputs and logical judgmental factors, the PCQ machine tools analyzed. Productivity Increase Ratio machines tools analyzed. Productivity Increase Ratio (PIR), a derivative of PCQ shows actual productivity increases on an annual basis.

In an effort to simplify the many intricate computations in the productivity analysis of machine tool replacement, a computer program was developed by the Hackamacks. When given certain required inputs, a macro systems approach to productivity analysis is made. This analysis on the level of productivity of a particular machine tool or a complete inventory of machine tools is probably the most accurate, analytical device available to us at reasonable cost.

DATE MM--MILLING MACHINE, MISC (Sample) PRODUCTIVITY INCREASE RATIO 2 SHIFT USAGE

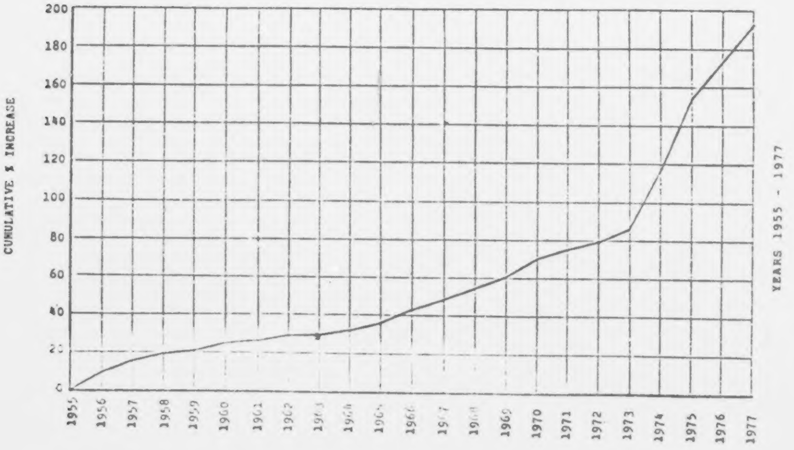
SERVICE LIFE 15 YEARS

YEAR OF MANUFACTURE OF PROPOSED MACHINE

YR/MF PRES MACH	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977 *E	1978 *E	1979 *E	1980 *E
1940	1.13	1.14	1.14	1.15	1.15	1.17	1.19	1.22	1.23	1.24	1.26	1.27	1.30	1.31	1.33	1.35	1.38	1.41	1.43	1.45	1.49
1941	1.11	1.12	1.12	1.13	1.13	1.14	1.14	1.19	1.19	1.20	1.22	1.23	1.25	1.26	1.28	1.30	1.33	1.35	1.37	1.38	1.41
1942	1.09	1.10	1.13	1.11	1.11	1.13	1.14	1.16	1.17	1.18	1.19	1.20	1.22	1.23	1.25	1.26	1.29	1.31	1.33	1.34	1.36
1943	1.09	1.09	1.12	1.10	1.11	1.12	1.13	1.16	1.14	1.17	1.19	1.20	1.22	1.22	1.24	1.25	1.28	1.30	1.32	1.34	1.35
1944	1.08	1.09	1.09	1.10	1.10	1.11	1.13	1.15	1.15	1.17	1.18	1.19	1.21	1.22	1.23	1.25	1.26	1.29	1.31	1.33	1.35
1945	1.06	1.07	1.07	1.07	1.08	1.09	1.10	1.12	1.12	1.13	1.14	1.15	1.17	1.17	1.18	1.20	1.22	1.23	1.25	1.27	1.28
1946	1.05	1.06	1.06	1.07	1.07	1.08	1.09	1.11	1.11	1.12	1.13	1.14	1.16	1.16	1.17	1.17	1.21	1.22	1.24	1.25	1.27
1947	1.05	1.06	1.06	1.06	1.07	1.08	1.09	1.11	1.11	1.12	1.14	1.14	1.16	1.17	1.18	1.20	1.22	1.24	1.26	1.27	1.29
1948	1.05	1.05	1.05	1.05	1.06	1.07	1.08	1.10	1.11	1.12	1.13	1.14	1.16	1.15	1.18	1.19	1.21	1.23	1.25	1.26	1.28
1949	1.04	1.05	1.05	1.05	1.06	1.07	1.08	1.10	1.10	1.11	1.12	1.13	1.15	1.16	1.17	1.18	1.21	1.22	1.24	1.26	1.27
1950	1.04	1.04	1.04	1.05	1.05	1.06	1.07	1.09	1.09	1.10	1.11	1.12	1.14	1.15	1.16	1.17	1.19	1.21	1.23	1.24	1.26
1951	1.03	1.03	1.04	1.04	1.04	1.05	1.06	1.08	1.08	1.09	1.10	1.12	1.12	1.13	1.13	1.15	1.17	1.18	1.20	1.21	1.23
1952	1.02	1.03	1.03	1.03	1.03	1.04	1.05	1.06	1.06	1.07	1.08	1.09	1.10	1.10	1.11	1.13	1.14	1.15	1.16	1.17	1.19
1953	1.02	1.02	1.03	1.03	1.03	1.04	1.05	1.06	1.06	1.07	1.07	1.09	1.09	1.10	1.11	1.12	1.13	1.14	1.16	1.17	1.18
1954	1.02	1.02	1.02	1.03	1.03	1.03	1.04	1.05	1.05	1.06	1.07	1.07	1.09	1.09	1.13	1.11	1.12	1.13	1.14	1.16	1.17
1955	1.01	1.01	1.02	1.02	1.02	1.03	1.03	1.04	1.05	1.05	1.06	1.07	1.08	1.08	1.09	1.10	1.12	1.13	1.14	1.16	1.17
1956	1.01	1.01	1.01	1.01	1.02	1.02	1.03	1.04	1.04	1.05	1.05	1.05	1.07	1.08	1.09	1.10	1.12	1.13	1.14	1.15	1.17
1957	1.00	1.01	1.01	1.01	1.01	1.01	1.02	1.03	1.03	1.04	1.04	1.05	1.05	1.06	1.07	1.08	1.10	1.11	1.12	1.13	1.15
1958	1.00	1.00	1.01	1.01	1.01	1.01	1.02	1.03	1.03	1.03	1.04	1.05	1.06	1.06	1.07	1.08	1.09	1.10	1.12	1.13	1.14
1959	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.05	1.04	1.06	1.07	1.09	1.10	1.11	1.12	1.13
1960	0	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.04	1.05	1.05	1.08	1.05	1.07	1.11	1.11
1961		0	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.10
1962			0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.03	1.04	1.05	1.04	1.07	1.08	1.07
1963				0	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.02	1.02	1.02	1.03	1.04	1.05	1.05	1.06	1.07	1.08
1964					0	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.02	1.02	1.02	1.03	1.04	1.05	1.05	1.06	1.07
1965						0	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.02	1.03	1.03	1.04	1.05	1.05	1.06
1966							0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.04	1.05	1.05
1967								0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.02	1.03	1.03	1.04	1.04
1968									0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.04
1969										0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.03	1.03
1970											0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.04
1971												0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02	1.02
1972													0	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.02
1973														0	1.00	1.00	1.00	1.01	1.01	1.01	1.01
1974															0	1.00	1.00	1.00	1.01	1.01	1.01
1975																0	1.00	1.00	1.00	1.01	1.01
1976																	0	1.00	1.00	1.00	1.00

APPENDIX B

INFLATIONARY TRENDS
METAL WORKING MACHINERY & EQUIPMENT - CODE #113
BASED ON WHOLESALE PRICE INDEX



APPENDIX C

APPENDIX OF TERMS:

ALGORITHMS—any special method of solving a problem; specifically, the repetitive calculations used in finding the greatest common divisor of two numbers.

BOOK VALUE— this is the financial/accounting recorded value in dollars, allowed by I.R.S. Tax regulations, that is less than original cost of the machine. This is the accounting record only.

GRINDERS— a generic term applied to a group of machines that remove metal by generally revolving a grit wheel against a metal surface.

MARKET VALUE—when a willing seller and a willing buyer meet and a sale is completed the value where exchange occurs is the going market value.

PRODUCTIVITY—this term applies to a comparison of the new machine producing more units in the same time span than the old machine.

USED MARKET—this market is highly competitive and reflects the demand for machines. To accurately determine current used prices is difficult.

SHIFT USAGE—applied to mean a usual period of 8 hours work/per person, or 40 hour week, or a minimum of 2000 hours per year. (This is one shift).

OPPORTUNITY HOURS LOST—this indicates the possible difference in production shift hours not now available, but what could be if a technologically better machine were used.

PRODUCTIVITY CRITERIA QUOTIENT
[PCQ]

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FOOT NOTE

[1] National Center for Productivity and Quality of Working Life, 1978.

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Starkville **Dalcraft Designs** Hobby Furniture Designs	10
EXPANDED	
Aberdeen **Conoco Chemical Co.** Polyvinyl Chloride	75
Corinth **Hosiery Mill, Inc.** Lingerie	50
Starkville **Niagara Lockport Industry** Felts	70
Holly Springs **Sunbean Co.** Small Appliances	60
Meridian **The Anaconda** Aluminum	

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	December 1979	November 1979	December 1978
Retail Sales	162.7	179.0	147.2
Electric Sales	203.3	198.9	190.0
Telephones in Service	220.7	220.0	210.6
Gasoline Gallonage	139.6	167.1	164.6
Loans of Savings & Loan Institutions	147.9	275.0	375.3

The Dean's Corner

As the pages of the calendar relentlessly turn, they signal a few delightful events which occur with great periodicity, such as the daffodils of spring, the vernal foliage of summer, the gold of autumn, the joys of Christmas and the annual Deposit Guaranty Symposium held each January in Jackson. In accordance with the wayfaring custom of hundreds of the state's leaders from all corners of the state and all fields of endeavor, this trek to Jackson was undertaken again this year on January 9. Many set out in the darkness of early morning in quest of the enlightenment and fellowship which is characteristic of this outstanding event.

This year the writer's old friend, John Maloney, Chairman of the Board of Deposit Guaranty National Bank, kept the symposium moving in an orderly fashion and introduced one outstanding speaker after another, each extremely authoritative in his respective economic outlook area. A summary of two of the talks will be presented in this issue, and the remaining ones will be discussed in the March **Business Review**.

The first speaker, Thomas A. Murphy, Chairman of the Board of General Motors, spoke on the topic, "What Lies Ahead for America."

The speaker facetiously referred to "page 53" of **Parkinson's Law**, which advises against selecting a speaker over 50, under 20 and anyone named Murphy. Mr. Murphy explained that Mr. Parkinson was simply "jealous" of Mr. Murphy because his law (Murphy's Law) is better than Parkinson's Law, though it does not consume a book in its statements. Readers will recall that Murphy's Law is stated, "that anything which can go wrong will go wrong and at the worst possible time."

The speaker reminded the audience that since 1972 GMC has established four plants in Mississippi, Packard Electric plants in Clinton and Brookhaven and Delco-Remy plants in Laurel and Meridian. With respect to these operations, Mr. Murphy stated: "We're happy here; we've been increasing our investments here at a steady pace; we've enjoyed good business relations and outstanding cooperation wherever we've turned in the state; and we look forward to expanding our contributions to the Mississippi economy and to the people of this great state for many years to come."

As the keynote speaker Mr. Murphy indicated that his talk and the ones which were to follow would emphasize what lay ahead in Mississippi during the 1980's. However, he made clear that it would be difficult to isolate this state from the rest of the nation and the world, because we have learned that we live in close proximity to a great many people who were until recently strangers, i.e., Iran and Afghanistan. He was reminded of Wendell Wilkie's "one world", and of our need to live in peace and harmony, because "the alternatives are too terrible to contemplate."

However, it was with great optimism that the speaker faces the new decade, as was evident throughout his talk. As he stated, we have had to face at least one major crisis in virtually every decade in the nation's history. Instead of being overwhelmed by a particular crisis, we should look back to gaining assurance from the past and forward to applying our knowledge and experience to problems which are certain to arise. [At this point the writer was reminded of Wolfe's Law, recently quoted in a "Dean's Corner": "Those who don't study the past will repeat its errors. Those who do study it will find other ways to err".]

Looking back to 1975, discouragement was rampant in America, the speaker reminded us. Many in responsible positions were stating that the nation's economy could not ever entirely recover from the devastating recession then in progress. "Watergate" was still a problem, the ravages of Vietnam had taken effect, and for the only time in history a non-elected President occupied the White House. The Arab oil embargo was crippling us; unemployment was high, as well as inflation. Surveys have shown in recent times that a majority of Americans feel that conditions have deteriorated during the past five years. Actually, great progress has been made (more jobs added than at any time in history, for example), but the speaker said that as the result of our preoccupation with current problems we have failed to perceive this progress. He emphatically stated that the future for this state and nation would be as "rich with opportunity and promise as their pasts have been."

It would be conceit to suppose that the problems we now face are more difficult than those solved by our predecessors. This nation with its high standard of living did not reach its present status in a continuous and smooth development. Certainty of progress has never been present; nor is it now. However, there is no reason why it cannot be achieved, according to the speaker, if we but keep things in perspective. With respect to the present status of the economy the speaker believes that we are merely going through a period of correction for those maladjustments which have developed, and that strong growth will be resumed later in 1980.

Mr. Murphy stated that the automobile industry had been unjustly accused of promoting its own special cause at the expense of society, and that the oil industry is currently being similarly unjustly accused. Other industries have also experienced this. But he stated, "that in such a contentious society [as ours] it is essential that we never lose sight of the national interest." Special interests should not be pursued to the detriment of the nation. An example of this was the 5-year delay in the Alaskan pipeline as the result of zealots who were fearful of irreparable damage to the ecology. The "No-Nukes" movement is another example of special interest groups with disregard for the welfare of the nation—only furthering their own self interests and beliefs. The speaker pointed out that Murphy's Law was definitely at work in the Three Mile Island incident, that everything that could go wrong, did go wrong. Yet there were no injuries because of the redundant safety devices built into the system. However, the fears of the "China Syndrome" ran rampant, "distracting us from the true national interest."

It is only through open discussion of our problems that self-interest groups can be exposed, and in our system of democracy, it is possible to carry on a heated debate and dialog without "breaking apart." "This is part of the strength of America." At this point the speaker quoted Winston Churchill, "Democracy is the worst system devised by the wit of man—except all others." All that is required of us is that in our system there must be a sense of underlying unity and a dedication to the common good.

The speaker said that many believe that America today is the most egalitarian society in the history of the world. [This is, no doubt, correct.] The gap, once wide, between the rich and poor, between the advantaged and disadvantaged has been narrowed "to an unprecedented degree", and unparalled opportunities for all have resulted. It was not just our great abundance of natural resources, our climate or rich soil which accomplished this but the "promise it held out to the religiously and the politically and economically oppressed of the world", who were sufficiently adventurous to become Americans. It was this spirit of adventure and sacrifice which explains the greatness of our system. "That system may be a little warped and restricted here and there, but it is still largely intact. It is our challenge now—at the beginning of a new decade—to use it well."

The speaker closed with this admonishment: "I commend such thoughts to you. . .promote your personal, your business and professional interests, and those of Mississippi, yes—but do this in such a way all of your fellow Americans will move forward right alongside of you."

In the question and answer period which followed, Mr. Murphy expressed such thoughts as, turbine engines have limitations for passenger vehicles, that shale oil, alcohol and electricity (batteries) will become more widely used in automobiles. He also believed that while many including General Motors would suffer from a Chrysler bailout, he felt that it was foreign to the American way to protect against failure and that the government should not be involved in the operation of the company.

Another outstanding presentation was made by Robert N. Rasmus, President and Chief Executive Officer of the Masonite Corporation. His address dealt with "the Outlook for the Forest Product Industry in the Eighties," although his opening remarks included some perceptive observations of a broader nature.

In his introductory statements he summarized some of the events of the 70's which had a traumatic impact on America, and in many cases throughout the world. Such things as Watergate, double digit inflation (twice), the decline of the dollar (internationally) and the realization that there were limits to our resources in America. This was particularly troublesome to Americans, and according to Mr. Rasmus is causing us to rethink our economic concepts and values. "However, I believe that this will have a positive long-run effect by forcing us to find better ways to utilize our land, our water and our minerals,". . .as well as human and financial resources. We are also being forced to consider the problem of capital formation and excessive government regulation.

Although 1980 "will see a slackened demand for forest products as housing starts drop as much as 25% from last year's level," the eighties will see an increasing demand for timber products as opposed to a limited supply. While profit margins will likely be lower for the industry in 1980, as the result of the (recession now effecting the industry, recovery should be) vigorous and the outlook for profits in the 1980's is good. He expects higher prices for timber products after the recession. [The writer cannot but wonder if the speaker has bought any retail lumber products recently, and if so, if he is astounded at the prospects of even high prices.] "Demand for lumber, composite boards and woodpulp is expected to reach record levels in the 1980's."

It is expected that 17 million new households will be added during the decade. This could lead to an average of 2 million housing starts annually, which is a quarter of a million more starts than was the average for the 70's. Mr. Rasmus believes that 50% of the housing activity will be centered in the south. Other demands for forest products will be especially strong during the 80's according to the speaker. Softwood lumber use will increase from 39 billion boardfeet in 1979 to an average of 45 billion during the coming decade. Particle board demand will increase from 3½ billion feet to 4½ billion annually. And, the demand for new types of particle board will explode by seven-fold (½ billion to 3½ billion feet). The demand for timber is growing more rapidly in the south than in other regions. As an example, at the beginning of the 70's only 17% of the nation's plywood capacity was located in the south, and by the end of the decade the figure had grown to 50%; by the end of this decade it will be close to two-thirds. The major growth in sawmill capacity is also expected to be in the south. Because of this, prices for Southern softwood is expected to rise faster than Western timber and by 1980 prices will actually be higher for Southern softwood.

The per capita consumption of wood has declined during this century from about 500 board feet to 200. Substitutes in construction, such as bricks and steel, have been responsible. However, Mr. Rasmus expects a reversal in this trend because of the renewable nature of wood, and because less energy is required. For example, exterior brick walls require seven to eight times the energy to produce as wood walls. Other comparisons are even equally dramatic. Yet manpower and capital resources required are about the same for wood as for nonwood-based materials. Greater use for wood and wood by-products for fuel is also expected.

But, according to Mr. Rasmus, "In the face of these ever increasing demands for forest resources, we are seeing signs of a stagnant or even shrinking supply." Privately owned forests in the pacific Northwest have become depleted of high-volume stands. Fifty percent of our saw timber is on federally owned lands, and the sale of timber from these actually declined during the 70's. Over one-half of forest lands are owned by private individuals and production on these lands is not efficient, because of lack of proper management, size of holdings, and because there is a lack of interest in timber cultivation in many instances.

For the past fifty years the U. S. has not been self-sufficient in terms of timber supplies, and it is necessary to import about 25% of our needs. [The writer has begun to wonder if we are self-sufficient in anything, anymore, and **why** we are not.] Mr. Rasmus believes that better use of our timber lands should enable us to export "billions of dollars of timber products annually."

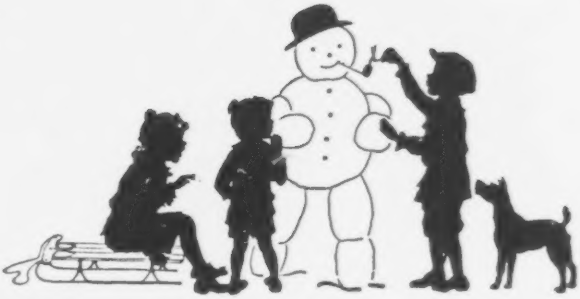
A more efficient use of forest land and wood products will require certain developments in the decade ahead. These will include more intensive forest management on both private and public lands. Technological advances in manufacturing are expected, and the commercial development of products, such as wood—composite boards, will use wood more efficiently than traditional lumber. "It takes almost three times as much wood material to make a ton of softwood lumber as to make a ton of particle board or hardboard."

The speaker stated that the most immediate return on investments in growing timber can be obtained in this area, and to expedite timber planting a new nursery near Laurel has been established to produce as many as 10 million seedlings per year. It was, incidentally, pointed out that forest product companies own only 14% of the nation's commercial forest lands, although most companies have assistance programs to help private forest owners.

The speaker looks forward to the decade ahead as a period of great innovation for the forest products industry. He expects a greater variety and more efficiently produced wood products. He expressed great optimism for the future of the industry, which augurs well for Mississippi, which is becoming increasingly important in the forest products industry.

The next issue will be devoted to summarizing the remaining talks, which were both interesting and thought provoking.

—Gaines M. Rogers, Dean



Tourist Briefs

Cotton Gin Port Site

Amory, Mississippi

Very little remains on the east bank of the Tombigbee River, where Cotton Gin Port once stood as a thriving river town. The steamboat dock and all of the houses and stores are gone, marked only by numerous scattered brick and foundation stones. Some of the streets, particularly Jackson Street, are still visible. Jackson Street, concreted and made part of the Amory-Okolona road in the Twentieth century, was the main business street leading to the river. Portions of the concrete can still be seen where the road left the ground to rise to the old one lane iron bridge, which was built in 1914. The four large concrete pillars, two on each bank of the Tombigbee, which once supported the old bridge still stand. Much of the remaining evidence of the town's existence is undoubtedly covered by silt, deposited through the years by the everflowing river. Remains of Gaines Trace can be easily followed to the Tombigbee, just north of the townsite.

The famous "Cotton Gin Magnolia," supposedly brought upriver from Mobile by a steamboat captain and planted in the yard of Peter Knowles prior to the Civil War, still stands. The D.A.R. monument, erected in the 1929s to commemorate Cotton Gin Port, is located under this old tree.

The site of Cotton Gin Port, located at the effective head of navigation on the Tombigbee River, is one of the most historic spots in Mississippi. Its significance predates permanent white settlement by untold centuries. Recent archaeological surveys in the area indicate prehistoric Indian occupation from approximately 500 B.C., continuing well after white contact. The region around Cotton Gin Port was also inhabited by the historic Chickasaw Indians. Numerous Indian trails, destined to be later developed as roads by white settlers, radiated from the Cotton Gin Port area.

The **Final Report of the United States DeSoto Expedition Commission** states that Cotton Gin Port is one of the three possible locations where the expedition of Hernando DeSoto may have crossed the Tombigbee River in the fall of 1540. According to some accounts, Baltasar de Gallegos, a member of the expedition and kinsman of Cabeza de Vaca, was dispatched, along with thirty horsemen, from the main Spanish party and crossed the river at or near the location of Cotton Gin Port; whereas, the main body of DeSoto's troops crossed at what was later known as Morgan's Ferry near Aberdeen.

In 1736, Bienville, civil and military governor of the French colony of Louisiana, undertook a war against the Chickasaws. With a force of approximately 600 men, Bienville moved north from Fort Conde' at Mobile up the Tombigbee River in April, 1736, reaching the "last portage, . . . situated on a fine bluff ten leagues from the villages of the Chickasaw Indians" on May 22. Here, the French found 600-700 of their Choctaw allies, including their chiefs. The French remained here two days in order to plan strategy with the Choctaws and to construct a fort as a base of operations. Approximately 600 piles (round logs) the size of a man's thigh were cut for the palisades. Thirty-five men were left here on May 24 when Bienville moved further north in his campaign against the Chickasaws, which resulted in his subsequent defeat at the Battle of Ackia. Following the defeat, Bienville and his men returned to the "portage" on May 29 and reembarked on that same day down the Tombigbee River, abandoning the recently constructed fort.

In 1752, the Marquis de Vaudreuil, Bienville's successor, undertook another military expedition against the Chickasaws. He moved up the Tombigbee River and occupied Bienville's old fort, using it as his base of operations. Although destroying some of the Chickasaw's cattle, crops and abandoned villages, Vaudreuil's campaign met with little success, and he returned to his base in the Cotton Gin Port region before moving back to New Orleans.

Captain Bernard Romans, who was employed by the Britich to survey the extensive area of West Florida, noted in **A Concise Natural History of East and West Florida** that on December 13, 1771, he and his party passed one bluff (present Cotton Gin Port), "where the French formerly had a fortified trading house, about one mile below the mouth of the creek (Town Creek), on the west bank. . . ."

After the passage of the Indian Civilization Act in 1801, the United States government established a gin on the west side of the river, in an attempt to convert the Chickasaws into peaceful farmers and to win the support of the tribe, which had long been allied with the English. The town of Cotton Gin Port received its name from this gin.

A ferry was placed in operation at Cotton Gin Port around 1803. It was used until 1914 when an iron bridge was build over the Tombigbee at this point.

In 1807, Edmund Pendleton Gaines, under orders from Secretary of War, Henry Dearborn, surveyed the Indian trail, which was to become Gaines Trace, an important travel artery during the territorial period. In 1810, George S. Gaines, Factor at St. Stephens on the Tombigbee and younger brother of Edmund P. Gaines, successfully negotiated with the Chickasaws to secure the opening of Gaines Trace, thus connecting the Tennessee River at Muscle Shoals to the Tombigbee River at Cotton Gin Port.

In late 1814, Edmund Pendleton Gaines led badly needed reinforcements to General Andrew Jackson at New Orleans, using Gaines Trace and crossing the Tombigbee River at Cotton Gin Port.

The first white farmers to settle permanently in the immediate vicinity of Cotton Gin Port probably arrived in 1816. In that year, the Chickasaws ceded a large portion of their land to the United States, with the Tombigbee River and Gaines Trace serving as the respective western and northern boundaries of the cession. Therefore, Cotton Gin Port was located at the western tip of United States territory in the upper Tombigbee region.

After the Chickasaw Cession of 1816, Cotton Gin Port became the trading post for the Chickasaws. After the removal of the Indians from the area in 1837, the town relied heavily on the cotton trade and became a major steamboat shipping point on the upper Tombigbee.

Court sessions were held in Cotton Gin Port as early as 1821, prior to the establishment of a seat of justice for Monroe County. Dr. W. F. Boyakin established the first school at Cotton Gin Port in 1824. The town, incorporated by the Mississippi Legislature in 1838, reached its most prosperous period around 1848, at which time it had a carding factory, a flouring mill, twenty stores, and a population of approximately five hundred.

Cotton Gin Port died abruptly in 1887 when the Kansas City, Memphis and Birmingham railroad was completed, running three miles to the east of the town. This served to establish the new town of Amory, which quickly absorbed the business and population at Cotton Gin Port. Some of the buildings at Cotton Gin Port were disassembled and taken to Amory, while other smaller structures were rolled on logs intact to the new town.

The acquisition and development of the site of Old Cotton Gin Port has been recommended in the first edition of the Mississippi Statewide Comprehensive Historic Preservation Plan and funds for this work have been allocated by the Tombigbee River Valley Water Management District and the Monroe County Board of Supervisors.

MEET THE FACULTY

Dr. Giovanni Giglioni

Giovanni (John) Giglioni, or "Dr. G" as he is called by most of his students, has been on the Faculty of the School of Business and Industry since 1964.

He arrived in the United States from his native Italy in 1955 and after a work assignment with the Italian Government, in New Orleans, he entered Tulane University where he received his BBA (1958) and MBA (1959). His doctorate degree (DBA) is from Indiana University (1968).

"Dr. G" has taught management and other courses at Tulane, Indiana, LSU in New Orleans and Mississippi State University for the past 21 years. At MSU along, more than 7,000 students have been exposed to his ideas in a variety of classes!

In addition to teaching, "Dr. G" has been active in research and service activities. Some of his research efforts, conducted singly or with other scientists, include: "A Multidisciplinary Research Program on the Environment," a research program (submitted to and subsequently funded by NASA) developed for the Institute of Space and Environmental Sciences and Engineering, 1968; "Manpower Planning for Selected Manufacturing Firms in Mississippi," published by the Bureau of Business and Economic Research, Mississippi State University, 1970; **Extension of Project CARE-SOM** (Coordinated Accident Rescue Endeavor, State of Mississippi) prepared for the National Highway Traffic Safety Administration, U. S. Department of Transportation, published by the Division of Research, College of Business and Industry, Mississippi State University, June, 1971; "Conspectus of Management Control Theory: 1900-1972," published in the **Academy of Management Journal**, June, 1974; "Experiences with the Use of Operations Research Tools," published in the **Proceedings**, **Southwest Division**, **Academy of Management**, 1974; and "International Potential Markets for Miller," Project No. 14(3) Grant 04-5-158-54, Research and Report Completed for N.O.A.A., U. S. Department of Commerce, 1976.

In the services area, "Dr. G" has shared his time and expertise with many organizations including the Academy of Management; the USDA-Agricultural Stabilization and Conservation Services, and the Farmers Home Administration; the USDL; the American Production and Inventory Society-Mississippi Chapter; the Southern Management Association; the Mississippi Manufacturers Association; Employment Security; C.E.T.A.; and the Small Business Administration.

In the private sector of the economy "Dr. G" has shared his knowledge as consultant and trainer with a number of enterprises in the apparel, chemical, furniture, automotive parts, and electronics industries.

"Dr. G" says: "I have never regretted my decision to choose teaching as a career. It offers the challenge and the opportunity to contribute toward the welfare of our society by preparing young people for management careers. It is my most sincere hope to measure up to this challenge."

STATE ECONOMIC INDICATORS

Indicator	December 1979	November 1979	December 1978	Per Cent Change	
				One Month Ago	One Year Ago
EMPLOYMENT, EARNINGS AND HOURS [1]					
Total Employment (000's)	973,000	978,000	971,000	— 0.5	0.2
Non-Ag Employment	838,000	836,900	808,700	0.1	3.6
Mining	9,400	9,400	8,100	0.0	16.0
Contract Construction	47,300	48,300	43,100	— 2.1	9.7
Manufacturing	229,200	231,200	233,700	— 0.9	— 1.9
Transportation and Public Utilities	40,600	41,300	38,100	— 1.7	6.6
Wholesale and Retail Trade	169,600	166,100	163,700	2.1	3.6
Finance, Insurance and Real Estate	32,100	32,200	31,600	— 0.3	1.6
Service	120,900	121,000	117,400	— 0.1	3.0
Government	188,900	187,400	173,100	0.8	9.1
Unemployment Rate (Per Cent Labor Force)	6.2	5.9	6.6	——	——
Average Weekly Earnings	204.51	203.81	191.76	0.3	6.6
Average Hourly Earnings	5.10	5.07	4.70	0.6	8.5
Average Weekly Hours in Manufacturing	40.1	40.2	40.8	— 0.2	— 1.7
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.) [2]	2,916	3,128	3,236	— 6.8	— 9.9
Gasoline delivered to Dealers (gals.) [3]	110,804	135,069	129,249	—18.0	—14.3
Dairy Production					
Milk (lbs.) [4]	62,000	60,000	63,000	3.3	— 1.6
Egg Production [4]	136,000	130,000	143,000	4.6	4.9
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations [5]	19,355	32,700	40,900	—40.8	—52.7
Construction Loans	1,663	3,600	3,400	—53.8	—51.9
Bank Loans [6]					
Bank Deposits [6]					
Time Deposits [6]					
Demand Deposits [6]					
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH) [7]	1,706,520	1,641,847	1,631,675	3.9	4.6
Telephones in Service [8]	1,463,532	1,459,424	1,396,578	0.3	4.8
AGRICULTURE (000's) [9]	490,323	118,747	312,127	312.9	57.1
Total Cash Receipts from Farm Marketings	90,170	90,987	99,573	— 0.9	— 9.4
Cash Receipts from Marketing Livestock	400,153	27,760	212,754	1,341.4	88.1
Cash Receipts from Marketing Crops					
RETAIL SALES TAX COLLECTIONS [10]	1,162,107	1,316,741	976,562	—11.7	19.0

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for September, 1979

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Because of the lack of comparability, this series is being suspended.

[7] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[8] South Central Bell Telephone Company

[9] U.S. Department of Agriculture—Estimated October, 1979

[10] Mississippi State Tax Commission

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago
Aberdeen	-12.3	-1.8	8,037	0.2	5.5	39,037	-4.3	12.2	68,110	10,942	57,400
Baldwyn	-8.8	-2.4	4,609	0.2	5.9	15,703	-10.7	8.9	— —	— —	— —
Batesville	— —	-12.9	8,553	1.2	6.4	48,556	1.1	55.2	14,000	530,050	2,106,863
Bay Springs	— —	— —	— —	— —	— —	20,114	2.1	2.6	— —	— —	— —
Bay St. Louis	— —	— —	13,003	0.3	9.1	27,620	-16.5	30.2	86,300	231,625	262,700
Belmont	-3.6	20.9	2,216	1.1	6.1	8,666	8.7	0.2	— —	— —	— —
Belzoni	— —	— —	4,771	0.7	6.0	24,482	-8.0	44.6	— —	32,892	52,200
Biloxi	— —	— —	44,540	0.2	1.2	243,847	22.1	73.9	— —	2,278,213	414,366
Brandon	— —	— —	11,310	0.9	2.0	23,887	-15.7	21.4	— —	1,903,000	440,400
Brookhaven	— —	— —	15,866	0.1	2.9	102,273	5.9	32.1	— —	— —	656,603
Brooksville	1.0	32.0	1,316	-0.5	6.1	4,067	63.4	35.7	— —	— —	— —
Canton	— —	— —	10,563	0.0	5.1	59,946	-0.3	22.0	— —	— —	27,500
Carthage	-11.8	-3.1	7,324	0.6	6.8	33,293	4.3	44.4	22,000	3,500	-0-
Charleston	18.9	44.6	4,039	0.2	3.6	16,227	-5.6	29.1	— —	— —	— —
Clarksdale	— —	— —	20,564	0.3	4.6	99,040	-5.0	18.7	465,749	1,620,755	61,800
Cleveland	— —	— —	13,987	0.3	3.2	81,487	-7.7	25.1	— —	— —	354,500
Collins	-3.4	6.3	4,555	0.1	4.8	33,148	-29.0	99.7	-0-	-0-	10,000
Columbia	— —	— —	15,440	0.3	5.3	61,403	-9.0	38.0	— —	— —	— —
Columbus	-2.8	52.7	33,392	0.1	4.2	186,615	-6.4	37.3	891,683	275,577	750,726
Corinth	-0.4	-1.3	20,295	0.3	5.4	98,030	-4.6	23.5	— —	105,170	— —
Crystal Springs	— —	— —	5,822	0.2	5.4	20,250	4.2	17.8	65,000	80,800	-0-
Drew	— —	— —	2,675	0.9	4.0	11,365	-11.6	24.8	— —	71,000	2,000
Edwards	— —	— —	1,598	0.6	5.7	3,292	-26.4	6.2	-0-	15,000	-0-
Ellisville	-2.9	-23.6	3,794	0.2	7.8	11,724	-8.1	17.7	— —	— —	— —
Eupora	12.7	3.1	4,346	0.5	6.0	14,935	-9.3	-7.4	— —	— —	— —
Fayette	6.1	-1.5	3,256	0.4	7.0	9,840	21.3	23.9	— —	— —	— —
Forest	-11.4	10.0	5,028	0.5	5.7	47,218	-16.3	62.3	— —	— —	47,550
Greenville	-24.3	38.4	36,396	0.4	5.1	220,775	-7.1	20.9	— —	— —	— —
Greenwood	— —	— —	23,563	0.3	3.3	140,667	-5.8	62.5	54,295	315,400	30,850
Grenada	— —	— —	13,930	0.1	4.9	71,639	-2.8	17.8	— —	— —	— —
Gulfport	— —	— —	59,925	0.4	4.9	227,528	-11.4	43.5	498,767	514,465	358,547
Hattiesburg	-40.3	-33.4	58,448	-0.1	6.2	296,951	-9.3	23.0	519,765	1,062,148	788,790
Hernando	— —	— —	6,930	0.9	6.4	20,413	-7.0	15.6	109,000	12,625	404,600
Hollandale	-2.2	42.3	3,300	0.6	5.6	10,729	-15.4	17.6	— —	— —	14,695
Holly Springs	19.8	23.0	7,263	0.4	5.1	32,899	-6.0	-0.6	-0-	81,000	— —
Houston	— —	-24.6	5,550	0.0	5.8	21,784	-11.0	-0.7	47,000	5,000	32,500
Indianola	5.6	27.0	7,637	0.7	4.4	57,356	-12.6	28.2	— —	— —	— —
Iuka	— —	— —	5,307	1.2	10.6	24,200	-4.8	19.5	— —	— —	— —
Jackson	-12.0	75.7	221,866	0.2	4.3	1,105,138	-16.8	-20.8	2,916,585	3,603,906	7,525,171
Kosciusko	6.0	— —	9,492	0.2	4.5	44,985	-12.3	19.7	5,900	179,000	905,708
Laurel	-5.9	15.4	33,585	0.4	5.0	220,783	-1.9	31.0	236,900	1,197,338	3,710,507
Leland	— —	— —	4,974	0.7	4.0	18,240	4.2	24.4	23,600	422,200	52,490
Lexington	— —	— —	4,712	0.0	5.1	17,713	4.5	20.6	— —	— —	— —
Louisville	-5.3	2.9	10,520	0.3	4.5	44,286	-8.8	2.4	98,000	89,500	214,000
Lucedale	— —	35.8	8,066	0.9	6.6	31,369	-13.4	26.6	-0-	-0-	30,000
Lumberton	— —	— —	2,851	0.6	2.8	8,026	13.3	64.2	— —	— —	— —
Macon	3.5	12.5	3,671	0.0	0.8	15,455	-15.7	25.5	— —	— —	— —
Magee	— —	— —	5,215	0.6	6.1	35,969	5.7	41.9	— —	— —	— —
Magnolia	-14.3	-25.0	4,170	0.2	6.2	7,769	-11.8	-11.9	2,000	9,800	5,000
Marks	21.5	67.5	5,419	0.6	3.8	15,591	-10.0	25.3	— —	— —	— —
McComb	— —	— —	19,487	0.3	5.3	100,470	-1.3	24.4	— —	274,925	15,700
Meadville	-0.1	— —	— —	— —	— —	4,619	-10.1	34.7	87,000	-0-	-0-
Mendenhall	— —	— —	6,454	0.9	5.9	20,250	1.9	4.1	26,670	5,000	750
Meridian	— —	— —	47,564	0.3	4.5	327,000	0.7	32.2	1,367,121	1,690,479	1,293,160
Monticello	5.2	15.0	4,667	-0.1	6.0	16,614	-7.1	23.9	28,000	6,000	21,000
Morton	-14.3	-6.5	3,413	-0.1	5.0	15,655	-22.8	14.8	— —	— —	— —
Moss Point	-7.6	9.6	16,581	0.5	2.3	44,771	7.1	45.9	446,265	332,111	66,143
Natchez	— —	— —	28,966	0.7	5.6	193,259	2.8	40.0	311,530	209,000	176,515
New Albany	46.3	— —	11,020	0.4	5.3	48,585	2.5	55.8	40,000	127,938	729,950
Newton	-7.4	0.2	4,044	0.5	4.8	19,518	-13.9	25.2	22,800	31,750	5,400
Ocean Springs	-34.3	-4.5	15,585	0.3	4.1	65,916	-2.2	54.1	— —	174,135	— —
Okolona	-7.8	-10.9	3,395	0.1	4.5	12,595	-18.2	41.9	— —	— —	— —
Oxford	— —	— —	21,042	-0.9	3.7	76,206	-5.3	15.2	280,321	57,000	138,282
Pascagoula	— —	— —	33,834	0.2	0.1	208,948	-4.1	49.1	930,189	625,879	488,278
Pass Christian	— —	— —	5,466	0.4	4.2	10,817	4.4	25.6	100,800	9,200	167,900
Philadelphia	— —	— —	11,347	0.6	6.1	44,884	-13.1	35.7	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago	Current Month December	Month Ago	Year Ago
Picayune	——	——	14,861	0.3	6.4	62,799	— 1.1	30.6	310,000	——	116,790
Pontotoc	—12.5	16.6	9,174	0.0	4.6	35,750	— 1.8	24.6	——	——	——
Poplarville	——	——	4,054	0.2	2.5	11,571	—11.6	—23.2	30,000	35,000	39,000
Port Gibson	5.6	21.8	5,666	—0.1	10.3	13,356	8.4	0.8	——	——	——
Prentiss	—21.3	23.4	4,326	0.7	5.7	16,786	— 7.0	14.2	250,000	10,000	26,000
Quitman	—12.7	3.6	4,811	0.7	5.4	21,537	— 8.9	17.7	——	——	——
Raymond	6.5	26.9	3,090	—1.1	8.5	8,760	7.0	20.0	——	——	——
Richton	——	—13.7	1,947	1.1	6.4	10,364	7.7	12.5	—0—	44,620	26,990
Rosedale	——	——	1,645	0.3	4.6	6,415	1.0	16.8	——	——	15,000
Ruleville	—30.8	— 8.6	1,970	0.3	1.8	10,851	— 1.3	45.8	17,689	113,300	93,400
Sardis	——	——	3,477	0.3	5.0	13,856	11.0	5.0	38,000	307,000	75,000
Senatobia	7.4	20.0	6,686	0.5	7.0	39,137	6.9	18.4	——	68,000	5,000
Shelby	— 1.0	65.6	1,695	0.3	2.8	10,195	— 3.3	16.2	——	——	——
Starkville	——	——	24,430	—0.9	4.3	81,781	— 4.2	29.0	280,000	336,000	204,000
Summit	——	——	1,613	1.6	6.7	7,349	—12.0	4.8	——	——	——
Taylorsville	— 0.7	39.3	1,764	0.9	4.9	10,189	— 9.6	10.6	—0—	—0—	——
Tchula	——	——	2,015	0.5	4.7	4,431	—13.6	35.5	—0—	—0—	——
Tunica	——	——	4,227	1.1	4.9	15,772	— 8.2	2.3	——	——	——
Tupelo	1.5	6.7	36,970	0.2	5.2	260,857	2.7	17.5	——	——	——
Union	—10.0	8.6	2,717	0.4	4.3	11,329	—24.6	2.4	——	——	——
Utica	——	——	2,958	0.3	5.8	9,367	47.9	42.2	——	——	——
Vicksburg	——	23.4	37,980	0.3	3.9	15,877	—18.2	26.2	184,100	175,683	597,367
Walnut Grove	——	——	1,019	0.3	6.3	1,602	— 1.6	24.6	——	——	——
Water Valley	— 8.8	43.7	3,959	0.6	5.1	19,868	1.5	23.0	——	38,520	31,500
Waynesboro	——	— 7.0	7,386	1.2	9.0	52,312	—[illegible].7	23.5	27,000	59,000	56,000
West Point	—11.4	19.8	12,060	0.4	6.0	45,619	— 4.6	14.6	258,000	1,107,000	106,000
Wiggins	——	24.3	6,095	0.5	6.7	21,195	— 6.0	32.4	—0—	306,500	48,200
Winona	13.5	10.8	4,945	0.2	3.3	28,207	— 4.7	13.4	32,000	67,500	27,000
Yazoo City	——	22.0	12,083	0.1	4.5	59,375	— 1.3	20.5	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	December 1979	November 1979	December 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	147,300	146,100	142,900	0.8	3.1
Unemployed Persons	5,500	5,000	6,700	10.0	—17.9
Per Cent of Labor Force	3.7	3.4	4.7	——	——
Employed Persons	141,800	141,100	136,200	0.5	4.1
Non-Ag Wage & Salaried	147,200	146,900	135,750	0.2	8.4
Manufacturing	19,100	19,000	18,650	0.5	2.4
TELEPHONES IN SERVICE	240,822	240,342	231,064	0.2	4.2
CITY SALES TAX COLLECTIONS	1,150,444	1,376,788	1,431,437	—16.4	—19.6

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	December 1978	November 1979	December 1978	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	58,580	58,000	61,390	1.0	— 4.6
Unemployed Persons	3,620	3,680	4,030	—1.7	—10.2
Per Cent of Labor Force	6.2	6.3	6.6	——	——
Employed Persons	54,960	54,320	57,360	1.0	— 4.2
Non-Ag Wage & Salaried	57,540	56,980	57,760	1.0	— 0.4
Manufacturing	7,960	7,850	8,010	1.4	— 0.6
TELEPHONES IN SERVICE	109,931	114,233	106,414	—3.8	3.3
CITY SALES TAX COLLECTIONS	482,192	467,525	307,439	3.1	56.8

Motor Vehicle Registration
By County

Source: Office of State Motor Vehicle Comptroller.
Computations by Division of Business Research.

County	1977	% of State	% Change	1978	% of State	% Change
Adams	26,468	1.6	2.74	25,264	1.6	−4.55
Alcorn	23,198	1.4	2.99	22,342	1.4	−3.69
Amite	9,271	0.6	3.01	9,328	0.6	0.61
Attala	13,600	0.8	3.40	13,211	0.8	−2.86
Benton	5,555	0.3	2.79	5,768	0.4	3.83
Bolivar	24,599	1.5	3.53	23,601	1.5	−4.06
Calhoun	10,797	0.7	3.44	10,050	0.6	−6.92
Carroll	6,347	0.4	2.39	6,208	0.4	−2.19
Chickasaw	12,415	0.7	4.14	11,676	0.7	−5.95
Choctaw	6,124	0.4	4.06	5,853	0.4	−4.43
Claiborne	6,409	0.4	3.32	6,107	0.4	−4.71
Clarke	12,277	0.7	3.12	11,814	0.7	−3.77
Clay	12,853	0.8	3.38	12,408	0.8	−3.46
Coahoma	19,970	1.2	3.92	18,931	1.2	−5.20
Copiah	16,722	1.0	3.26	16,591	1.0	−0.78
Covington	11,288	0.7	3.56	11,046	0.7	−2.14
DeSoto	38,547	2.3	4.17	37,864	2.4	−1.77
Forrest	41,800	2.5	4.09	41,471	2.6	−0.79
Franklin	6,205	0.4	4.78	5,977	0.4	−3.67
George	10,980	0.7	3.36	10,717	0.7	−2.40
Greene	6,389	0.4	4.84	5,864	0.4	−8.22
Grenada	14,526	0.9	4.59	13,481	0.8	−7.19
Hancock	14,234	0.9	2.26	14,946	0.9	5.00
Harrison	104,013	6.4	2.89	103,139	6.4	−0.84
Hinds	172,748	10.6	2.84	169,700	10.6	−1.76
Holmes	11,099	0.7	1.31	10,505	0.7	−5.35
Humphreys	7,497	0.5	3.04	7,119	0.4	−5.04
Issaquena	2,002	0.1	3.57	1,925	0.1	−3.85
Itawamba	14,446	0.9	4.42	13,548	0.8	−6.22
Jackson	79,007	4.8	3.53	75,731	4.7	−4.15
Jasper	11,881	0.7	7.93	11,691	0.7	−1.60
Jefferson	4,991	0.3	4.66	4,744	0.3	−4.95
Jeff Davis	8,892	0.5	2.36	8,846	0.6	−0.52
Jones	44,860	2.7	3.32	44,580	2.8	−0.62
Kemper	6,587	0.4	4.84	6,280	0.4	−4.66
Lafayette	15,878	1.0	2.87	15,449	1.0	−2.70
Lamar	17,143	1.0	6.98	16,345	1.0	−4.65
Lauderdale	52,275	3.2	2.81	51,445	3.2	−1.59
Lawrence	8,842	0.5	4.91	8,553	0.5	−3.27
Leake	12,885	0.8	3.79	12,569	0.8	−2.45
Lee	43,897	2.7	3.73	41,726	2.6	−4.95
LeFlore	22,717	1.4	1.71	21,960	1.4	−3.33
Lincoln	20,182	1.2	2.00	20,231	1.2	0.24

County	1977	% of State	% Change	1978	% of State	% Change
Lowndes	36,945	2.2	3.28	35,747	2.2	−3.24
Madison	23,418	1.4	4.95	23,479	1.5	0.26
Marion	17,367	1.1	3.36	17,282	1.1	−0.49
Marshall	15,501	0.9	3.60	14,573	0.9	−5.99
Monroe	25,154	1.5	3.29	25,118	1.6	−0.14
Montgomery	8,717	0.5	3.42	8,269	0.5	−5.14
Neshoba	16,461	1.0	3.77	15,357	1.0	−6.71
Newton	14,323	0.9	3.97	13,986	0.9	−2.35
Noxubee	7,041	0.4	3.54	6,637	0.4	−5.74
Oktibbeha	18,878	1.1	4.05	18,663	1.2	−1.14
Panola	16,742	1.0	3.53	15,942	1.0	−4.78
Pearl River	22,193	1.4	2.05	23,910	1.5	7.74
Percy	7,467	0.5	2.12	7,044	0.4	−5.66
Pike	23,432	1.4	3.69	22,683	1.4	−3.20
Pontotoc	14,668	0.9	3.66	13,999	0.9	−4.56
Prentiss	15,764	1.0	2.97	14,901	0.9	−5.47
Quitman	7,817	0.5	2.30	9,376	0.6	19.94
Rankin	49,177	3.0	3.50	49,847	3.1	1.36
Scott	16,054	1.0	2.84	15,038	0.9	−6.33
Sharkey	4,814	0.3	2.38	4,434	0.3	−7.89
Simpson	15,984	1.0	4.36	15,283	1.0	−4.39
Smith	11,067	0.7	4.59	10,530	0.7	−4.85
Stone	7,405	0.4	4.44	7,398	0.5	−0.09
Sunflower	18,228	1.1	3.18	17,662	1.1	−3.11
Tallahatchie	10,122	0.9	3.09	9,290	0.6	−8.22
Tate	12,369	0.7	3.91	11,946	0.7	−3.42
Tippah	13,379	0.8	2.01	12,567	0.8	−6.07
Tishomingo	12,767	0.8	2.96	11,840	0.7	−7.26
Tunica	5,642	0.3	4.02	5,277	0.3	−6.47
Union	16,242	1.0	3.86	15,324	1.0	−5.65
Walthall	9,407	0.6	3.37	9,319	0.6	−0.94
Warren	34,102	2.1	3.83	33,609	2.1	−1.45
Washington	38,020	2.3	2.78	40,497	2.5	6.51
Wayne	12,500	0.8	3.63	11,843	0.7	−5.26
Webster	7,797	0.5	3.81	7,554	0.5	−3.12
Wilkinson	5,703	0.3	2.55	5,605	0.4	−1.72
Winston	13,453	0.8	0.01	13,097	0.8	−2.65
Yalobusha	8,213	0.5	2.91	8,101	0.5	−1.36
Yazoo	16,990	1.0	4.11	16,203	1.0	−4.63
State Total	1,643,739		3.38	1,605,844		−2.31

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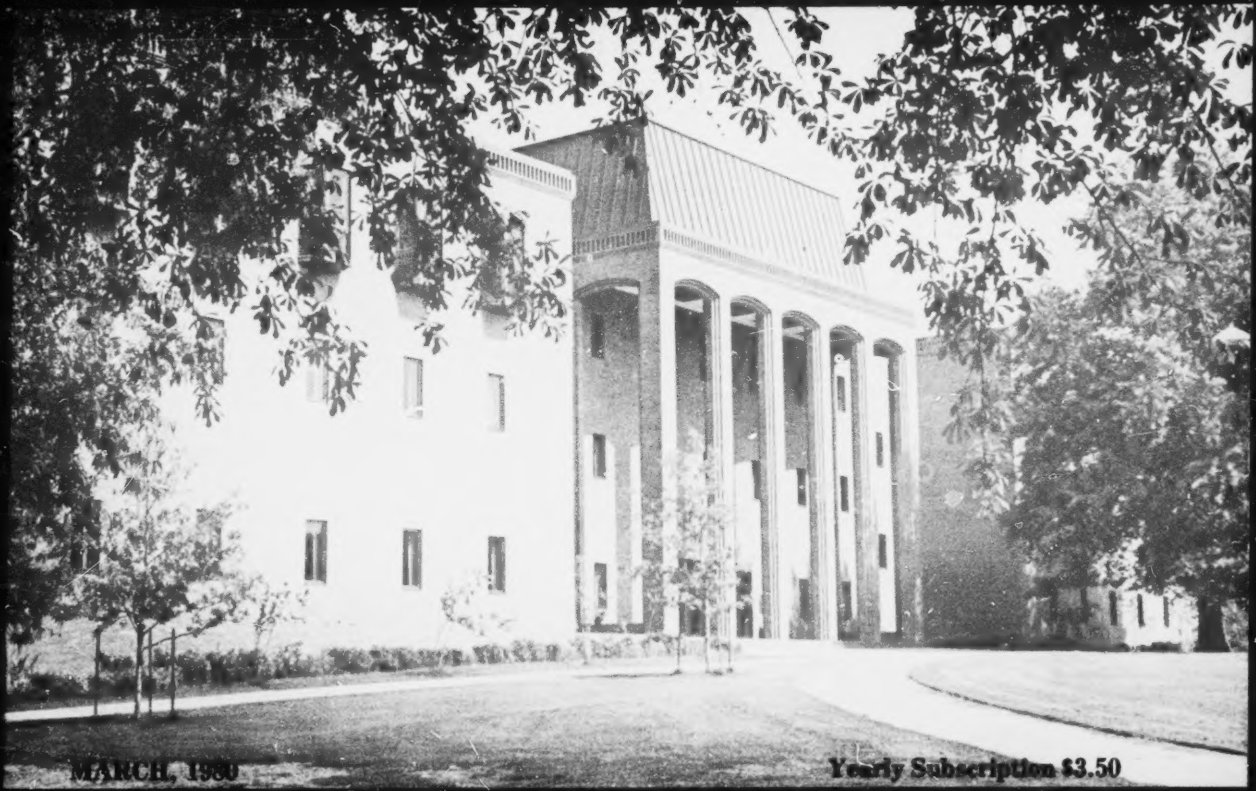

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Dr. Tommy W. Rogers is an Attorney at Law in Jackson, Mississippi. He received his MA and Ph.D. from Mississippi State University; LL.B., John Marshall School of Law; J.D., Jackson School of Law.

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Changing Mortality Patterns and Life Expectancy in Mississippi

by Tommy Rogers

During this century dramatic changes have taken place in the epidemological patterns of the Mississippi population. These, in concert with the other population processes, natality and migration, have significantly altered the composition of the population. One dimension along which this change has occurred is that of changing patterns of health and disease as indicated by causes of death. This is an important component of the epidemologic transition from high fertility and mortality to low fertility and mortality. The shift that occurs in these patterns triggers a chain reaction in mortality indices, life expectancy, and related social and administrative issues. In addition, patterns of fertility, age and sex structure of the population, and even migration patterns may be affected directly or indirectly.[1]

Overall epidemiologic transition may be traced through the stages or phases of 1) Pestilence and famine characteristic of primitive or preindustrial societies; 2) Receding pandemics, characterized by recession in mortality from infection and malnutrition and a striking decline in overall mortality; and 3) Degenerative and man-made diseases characteristic of modern developed highly technological societies, wherein there is a change in patterns of disease and mortality from epidemics and endemics of infectious diseases to degenerative and chronic diseases.

Comparative Mortality in Mississippi.

During this century three trends in the crude death rates (number of deaths per 1,000 population) have characterized the American population. There was a gradual decrease during 1900-1937, a rapid decline during 1937-1954, and a decreased rate of decline or even a fluctuation in the direction of the death rates since 1954. The dramatic reduction during 1937-1954 is attributable to the effect of the antibiotic "miracle drugs" on contagious and communicable diseases. The stabilization and increase in the death rates over the past two decades has been attributed to several factors. These include environmental factors, such as carcinogenic elements in air which is breathed and in food and water which is consumed, or the mortality effects of modern accidents, or the tension creating pace of modern living. Perhaps even more important is the shift from the preventable communicable diseases, particularly those which were traditionally responsible for most childhood mortality of the past, toward the chronic and degenerative diseases of maturity. Mortality cannot be postponed indefinitely. With comparative control of the communicable diseases of childhood, eventually the postponed mortality has to become a factor in mortality statistics.[2]

Declines have been greatest among children, among females, and among nonwhites. Whereas life expectancy at birth has increased by circa two decades during this century, life expectancy for persons who have already attained advanced age has increased comparatively little. By and large, life expectancy has increased because more people are surviving through childhood due to greater control of infectious and communicable disease, and not because older persons are living that much longer. The drop in mortality has increased life expectancy and survivorship, and by increasing the number of surviving aged persons who heretofore would have been eliminated by infectious diseases at younger ages, is a factor in the increased prevalence of various impairments, chronic illnesses, circulatory and degenerative diseases, and mental illnesses which have a physiological etiology.[3]

Death Rates in Mississippi

The Mississippi death rate has shown a general decline from its highest level during the 1918 influenza epidemic. Nevertheless, the death rate in Mississippi in 1977 (9.6) was slightly higher than the national rate (8.8).[4] Overall improvements in medical knowledge and technique, greater access to facilities, improved hygiene and sanitation, and general improvement in levels-of-living are reflected in the decline of the death rate (Table 1). These changes are particularly noticeable in the decrease in maternal and infant deaths (Tables 1 and 3).

One of the major changes in the epidemologic transition is an alteration in the proportion of total deaths toward a lower percentage of deaths accounted for by children and a higher percentage of total deaths

TABLE 1

TOTAL DEATH RATE AND MATERNAL DEATH RATE, SPECIFIED YEARS MISSISSIPPI

	Death Rate*			Maternal Death Rate**		
	Total	White	Nonwhite	Total	White	Nonwhite
1913	11.4	9.3	13.0	11	7	15
1920	12.3	9.3	15.1	9	6	13
1930	11.9	9.0	14.8	10	7	13
1940	10.6	8.6	12.6	6	5	7
1950	9.4	8.0	11.2	3	2	4
1960	10.0	8.9	11.4	1	.3	2
1970	10.5	9.8	11.8	.2	.2	1
1975	9.7	NA	NA	.1	0	3
1977	9.6	NA	NA	NA	NA	NA

* Deaths from all causes per 1,000 population.

**Deaths resulting from orgasm, pregnancy, childbirth, puerperium per 1,000 live births

Source: **Vital Statistics Mississippi 1975** (Jackson: Mississippi State Board of Health, 1975), pp. 99-101; **Monthly Vital Statistics Report**, DHEW Publication No. (PHS) 79-1120, Vol. 26, No. 13 (December 7, 1978), p. 18

TABLE 2

DEATH RATES,* BY AGE, RACE, AND SEX, MISSISSIPPI, 1970

AGE	Total		White		Nonwhite	
	Male	Female	Male	Female	Male	Female
Total	**12.4**	**8.8**	**11.6**	**8.0**	**13.8**	**10.0**
Under 1	13.4	28.2	21.6	18.9	51.8	38.8
1-4	1.5	1.3	0.9	0.8	2.2	1.8
5-9	0.6	0.5	0.6	0.5	0.6	0.6
10-14	0.7	0.5	0.7	0.4	0.8	0.6
15-24	2.5	0.8	2.1	0.7	3.0	0.9
25-34	3.4	1.5	2.4	0.9	6.1	2.8
35-44	5.6	3.2	4.3	1.7	9.2	6.4
45-54	12.4	5.7	10.9	4.2	16.2	9.2
55-64	25.2	11.7	23.6	8.8	28.4	17.5
65-74	50.2	27.2	49.8	23.3	50.8	34.2
75-84	101.3	69.2	101.4	68.1	101.0	71.5
85 and over	181.2	171.5	187.6	178.9	172.9	158.8

*Deaths per 1,000 population in specified group.

Source: Mississippi State Board of Health.

TABLE 3

INFANT AND NEONATAL MORTALITY, SELECTED YEARS, MISSISSIPPI

	Infant Mortality Rate*			Neonatal Mortality Rate**		
	Total	White	Nonwhite	Total	White	Nonwhite
1920	80.0	59.9	101.1	80.0	32.9	39.8
1930	68.3	51.0	84.5	35.3	30.8	39.4
1940	54.5	46.4	60.9	30.7	39.4	31.7
1950	36.4	28.1	42.6	22.4	20.6	23.8
1960	41.5	26.2	54.4	25.3	20.2	29.6
1970	29.1	19.3	39.7	20.3	15.7	25.2
1975	22.3	NA	NA	15.5	NA	NA

*Number of deaths of children under one year of age per 1,000 live births

**Number of deaths of infants under 28 days per 1,100 live births

Source: Mississippi State Board of Health and U. S. Public Health Service, Department of Health, Education, and Welfare

accounted for by deaths of elderly persons. Death rates by age in Mississippi range from 171.5 deaths per 1,000 males age 65 and over to less than one death per 1,000 males age 5-14 and per 1,000 females age 5-24. The death rate for females is lower than the rate for males at each age level. The discrepancy of 7.2 (35.4 for males, 28.2 for females) for persons under one year of age is greater than at any age level until about age 50. It thereafter increases to a maximum discrepancy of 32.1 for ages 75-84, and decreases thereafter (Table 2).

The proportion of deaths which occur to children under five years of age as a percentage of total deaths is a useful index for measuring the magnitude of mortality changes over time.[5] The proportion of total deaths which occurred to children under five in Mississippi decreased from 19% in 1930 to 10% in 1970. The proportional mortality of persons age 65 or beyond increased from under 30% in 1930 to 37.8% in 1950 and 46.7% in 1970.

Infant, Neonatal, and Maternal Mortality

Infant, neonatal, and maternal mortality are regarded as primary measures of the health level of a population. The infant death rate has been described as a social problem rather than a medical one in the sense that it is a vital indicator of the present and future well being of a population. The infant mortality rate in Mississippi has consistently exceeded the national rate. Nonwhite infant mortality has been and continues to be higher than the white rate. Infant mortality, which is closely correlated with socio-economic conditions and cultural habits, is one of the strongest indicators of disadvantage among a population group.[6]

Nationwide, infant mortality rates are higher in isolated (relatively remote from any large urban center) and nonmetropolitan counties. Higher than national rates are generally found in states in the low and middle range of state per capita income. Similarly, maternal mortality has been found to be above the national average in isolated rural areas and small towns.[7]

The longterm decline in Mississippi's infant mortality rate, which has been particularly noticeable since 1966, coincides with the introduction of federal programs designed to improve the living conditions of the poor population.[8] The dramatic improvement notwithstanding, the white infant death rate in Mississippi in 1975 of 15.8, which compares to the national rate of 14.2, was the fifth highest in the nation. The nonwhite infant death rate (29.4) was the third highest in the nation. The white infant death rate in Mississippi decreased from 26.6 in 1960 and 18.7 in 1970. The nonwhite rates at comparable times were 54.3 and 49.2.[9]Infant mortality in Mississippi in 1976 (20.2) was the second highest in the nation. However, provisional data for 1977 indicate a considerable drop in Mississippi's infant mortality to

14.5, close to the national rate (14.0), and placing Mississippi below about one-third of the other states in terms of their having higher infant mortality levels.[10]

Neonatal mortality, which refers to deaths of infants under 28 days of age, shows the same trend. Although the overall rate has decreased over time, the differential between white and nonwhite rates reflects differential living conditions and cultural practices.

For many years midwifery was a flourishing activity in Mississippi. In 1921 there were over 4,000 practicing midwives in the state. While they served a useful purpose in the delivery of health services to Mississippians in rural areas, ninety percent were illiterate and allegedly combined superstition with practical experience in their ministrations. In 1975, only 217 active granny midwives were registered with the Board of Health, and they were under the supervision of the county health department.[11] Less than four percent of the nonwhite births and less than one percent of the white births in 1975 were attended by a granny midwife.

Improved prenatal care, physician attended births, and possibly "family planning" are among the likely factors which account for the decrease in maternal mortality in Mississippi. Only 14.1% of the total live births (27.1% of the white live births, and 3.9% of the nonwhite) occurred in hospitals or clinics in 1940. This proportion increased to 46% in 1950, 73% in 1960, 90% in 1970, and 98% in 1975. As of 1975 over 99% of all white live births and 96% of the nonwhite live births were hospital or clinic events.

Changes in the Cause of Death

In 1920 tuberculosis and pneumonia were the major killers in Mississippi, accounting in combination for 18% of all deaths. By 1925 heart diseases (9% of all deaths) had emerged as the principal cause of death in Mississippi, although tuberculosis (8% of all deaths) and pneumonia (6% of all deaths) remained as major health problems. By 1940 the number of deaths from tuberculosis were less than one-half of what they were in 1920, but nevertheless accounted for 4.5% of all deaths. Some 75% of the slightly more than 1,000 deaths due to tuberculosis in 1940 occurred among nonwhites.

Heart disease accounted for 15% of all deaths in Mississippi in 1940, followed by nephritis (10%), vascular lesions (7%), cancer (6%), tuberculosis (4.5%) and pneumonia (4.5%). By 1950 heart diesease vascular lesions, and cancer had assumed their currently occupied ranking as the three major killers in Mississippi, accounting in combination for 27% of all deaths that year, 55% of all deaths in 1960, and 63% in 1976.

The death rate from heart disease increased from 97.4 in 1920 to 345.3 in 1970, while the death rate from cancer increased from 38.3 to 149.4 during this time. The death rates from tuberculosis and pneumonia decreased from 129.1 and 93.5 respectively in 1920 to 1.8 and 27.2 respectively in 1970. Influenza and nephritis, both of which were among the leading causes of death in 1920 with death rates of 75.2 and 73.6 respectively, were reduced substantially to rates of 5.0 for influenza and 6.6 for nephritis. Accidental deaths as a percentage of all deaths were 4% in 1914, 7% in 1940, 6% in 1950, 72 in 1960, up to 10% in 1970, and back down to 7% in 1977. Accidents, which were the sixth major cause of death in 1920, 1925, and 1970, and the fourth leading cause in 1940, have constituted the fourth leading cause of death in Mississippi since 1940. The death rate from motor vehicle accidents increased from 23.6 in 1950 to 28.5 in 1960 and 40.1 in 1970. The mortality rate from accidents in Mississippi is about one-third higher than in the rest of the country.

LIFE EXPECTANCY IN MISSISSIPPI

Average life expectancy of a population is derived from a life table. A life table is an hypothetical construct showing what would happen to a cohort of 100,000 births if the age-specific mortality rates were applicable throughout the life span of that cohort. Table 4 shows the Mississippi life table according age-specific mortality for 1969-1971.

Column 2 shows the probability of dying for a cohort of 100,000 according to 1969-1971 age specific mortality rates in Mississippi. Application of this percentage to the number alive at the beginning of the interval (Column 3) gives the number who would die during that interval (column 4). For example, 174 of the cohort of 100,000 would die between their first and second birthday. Subtraction of this number (column 4) from column 3 gives the number living at the beginning of the succeeding interval (next line in column 3).

Column 5 shows the number of years that those surviving to any age interval would live during that interval,[12] while column 6 is the total of that and each successive interval. Column 7 is the result of dividing column 2 (persons) into column 6 (cumulative years) to obtain the arithmetical average of years of life remaining. Life expectancy in Mississippi in 1970 was 69.25 years at age one. For persons age 50, average life expectancy was 25.24 years additional. The median (when number of years lived equals average number of years remaining at that age) between years lived and years expected occurs about age 37.

Life expectancy in Mississippi increased from 56 years at birth in 1930 to 68 years in 1970. The difference between male and female life expectancy, which is greater for females, increased from a differential of three years in 1940 to eight years in 1970. White life expectancy in Mississippi increased from 62 years at birth in 1930 to 71 years in 1970, while black life expectancy increased from 51 years to 64 years during this time. Of the sex-race categories, white females in Mississippi have the longest life expectancy at birth (75½ years), followed by nonwhite females (68 years), white males (66 years) and nonwhite males (60⅓ years).

TABLE 4

LIFE TABLE, MISSISSIPPI, 1969-1971

Age Interval	Probability of dying before next interval	Number alive at beginning of interval	Number dying during interval	Cumulative years lived during interval by all those alive at beginning of interval	Total years lived in this and subsequent intervals by those beginning interval	Average years of life remaining to those beginning interval
0 to 1	02797	100,000	2,797	97,975	6,829,512	68.30
1 to 2	00179	97,203	174	97,100	6,731,537	69.25
2 to 5	00279	97,029	271	290,581	6,634,437	68.38
5 to 10	00294	96,758	284	482,996	6,343,856	65.56
10 to 15	00304	96,474	293	481,720	5,860,860	60.75
15 to 20	00707	96,181	680	479,343	5,379,140	55.93
20 to 25	01000	95,501	955	475,203	4,899,797	51.31
25 to 30	.01154	94,546	1,091	470,044	4,424,594	46.80
30 to 35	01233	93,455	1,152	464,498	3,954,550	42.32
35 to 40	01721	92,303	1,588	457,782	3,490,052	37.81
40 to 45	02[illegible]5	90,715	2,290	448,197	3,032,270	33.43
45 to 50	03676	88,425	3,250	434,457	2,584,073	29.22
50 to 55	.05263	85,175	4,483	415,193	2,149,616	25.24
55 to 60	07158	80,692	5,776	389,693	1,734,423	21.49
60 to 65	10292	74,916	7,710	356,106	1,344,730	17.95
65 to 70	14319	67,206	9,623	312,894	988,624	14.71
70 to 75	.21073	57,583	12,134	258,424	675,730	11.73
75 to 80	.30091	45,449	13,676	193,285	417,306	9.18
80 to 85	.41660	31,773	13,237	125,126	224,021	7.05
85 to 90	.57025	18,536	10,570	64,642	98,895	5.34
90 to 95	.69002	7,966	5,497	24,270	34,253	4.30
95 to 100	.74667	2,469	1,844	8,843	9,983	4.04
100 to 105	.29104	625	182	1,140	1,140	1.82
105 and over		443				

Source: **Abridged Life Tables for Mississippi 1969-1971** (Jackson: Statistical Services Unit, Mississippi State Board of Health, 1974), p. 13.

Comparative Life Expectancy and Survivorship

Under life table conditions currently prevailing in Mississippi, more females (97%) than males (96.9%) would survive till their first birthday. The gap between the number of surviving males and females increases with age. By age 50 the excess of females over male survivors in a cohort of 100,000 each given 1969-1971 age-specific mortality rates would be more than 8,000. By age 70, there would be 68,372 surviving females, contrasted to 47,288 surviving males. Because of differential mortality one could expect the half-century reunion of a graduating class with equal numbers of boys and girls to have more female than male participants, and to have more widows than widowers.

The age discrepancy between male-female survivorship at age 50 is greater among whites than nonwhites. Some 92% of the white females, 85% of the white males, would survive to age 50. By comparison, 83% of the nonwhite females and 73% of the nonwhite males would survive to age 50.

EFFECTS OF EPIDEMOLOGICAL CHANGE

Among the most notable epidemological changes in Mississippi are:

1. The communicable diseases have declined as leading causes of death, and have been replaced by degenerative diseases such as heart disease, and vascular lesions of the central nervous system.
2. The drop in mortality has increased life expectancy and survivorship, but gains in life expectancy have not been homogeneous across the age spectrum. Declines in mortality have been greatest at younger ages, with the consequent survival of a larger percentage of a cohort into and through adulthood into old age, and thereby likely increasing the frequency of incidence of chronic and degenerative disease.

These changes, like other demographic alterations, both individually and severally in combination with other related demographic variables, has direct as well as indirect social consequences. Because the increase in survivorship is more pronounced among females than males, the differential in the sex ratio has been accentuated. The Mississippi sex ratio, which decreased from 98.7 in 1940 to 94.0 in 1970, shows progressive decrease with increasing age.

Increased survivorship has contributed to a lengthening of average family life. Basic demographic changes (longer life expectancy, reduced child bearing period, smaller family size, younger marriage) has resulted in a new phase of the family life cycle on a large scale basis—the postparental phase of the family cycle or the family of the "empty nest".[13] This stage, which is unique to recent decades as common experience, is the time remaining after the family has launched its youngest child. Whereas at the turn of the century one of the marital partners, on the average, would decrease about two years before the youngest child left home, the contemporary couple may expect over forty years in which the marriage may degenerate from the allegedly noble aspirations of the nuptials,[14] before termination by natural attrition, about fifteen of these years after "withdrawal of. . .children from the family, leaving husband and wife [again] as the family unit."[15]

Increased health levels, as a consequence of increased survivorship, have probably resulted in a higher incidence and prevalence of at least some illnesses. The increased survivorship may also be an important factor in some increased economic tensions and political pressures as the assumptions and projections under an earlier demographic structure begin to manifest their longterm effect. It has been suggested that retirement at 65 was instigated as part of the German civil service in the last century because relatively few people would survive to collect the pensions. Within the United States the large number of persons receiving indexed governmental pensions, sometimes beginning decades before their middle sixties, is one of the pressures for continuation of governmental inflationary policy in order to meet the unfunded obligations as they become due.[16]

The social security system, long regarded as a sacrosanct shibboleth above cavet by enlightened persons irrespective of its financing scheme—which is not reasonably analagous to legitimate private insurance which must maintain a fund against which future obligations can be met and can be described as such only by a chicanerous perversion of words as generally understood and interpreted—[17] may be expected to be a source of continuing anxiety and concern both for persons who expect benefits and those who are increasingly beset with escalating penalties to support government's generosity. This bind is partially due to the demographic composition of increasing numbers of claimants and decreasing numbers of workers, aggravated by governmental inflationary policy.

The social security system is particularly sensitive to demographic trends because it subsists on taxes which are expended as received for whatever purpose on which government may be spending, so that present contributors are contributing to present beneficiaries rather than to their own retirement.[18] The capacity of the federal government to coin money and the pressure of increasing number of recipients promised their benefits in turn probably assures a continuation of inflationary policy.[19] Tensions associated with the increasing bind on workers assaulted by government for higher taxes—partially as necessity to make welfare expenditures on those in want because of the policies of the very government toward whom they must turn for help in their deprivation—combined with inflation which makes existence more problematical and tension riven, may well result in an increasing public tolerance for euthanasia.

SUMMARY

Dramatic changes have taken place in the epidemologic patterns of the Mississippi population in this century. These include an increased likelihood of survival through infancy and childhood with increased control of the communicable and infectious diseases, and a consequent increase in survivorship and average life expectancy. A decreasing proportion of total deaths now occurs among children. Infant, neonatal, and maternal mortality have decreased greatly, but remain higher among nonwhites than among whites. Chronic and degenerative diseases have replaced the infectious and communicable diseases as the leading causes of death. Demographic changes, in interrelation with economic tensions and the actuarial unsoundness of social security and governmental retirement systems, present a potential arena for sociopolitical conflict in the future.

FOOTNOTES

1. Abdel R. Orman, "The Epidemiologic Transition in North Carolina During the Last 50 to 90 Years: Changing Patterns of Disease and Causes of Death," **North Carolina Medical Journal** (February, 1975), p. 83.
2. T. E. Smith, "The Control of Mortality," **Annals**, 369 (January, 1967), pp. 16-25; D. O. Cowgill, "The Aging of Populations and Societies," **Annals** (September, 1974), pp. 2-18.
3. Monroe Lerner, "Mortality and Morbidity in the United States," **Annals**, 337 (September, 1961), pp. 1-10.
4. Monthly Vital Statistics Report, Annual Summary for the United States (Hyattsville, Md.: National Center for Health Statistics, DHW Publication No. (PHS) 79-1120, Dec. 13, 1978), pp. 7, 19.
5. Abdel R. Orman, "The Mortality Transition," **North Carolina Medical Journal** (January, 1975), p. 4.
6. Mark G. Arnold and Greg Rosenbaum, **The Crime of Poverty**, (Skokie, Illinois: National Textbook Co., 1973), pp. 26-27; Bruce Balfe, "Editorial," **Journal of the American Medical Association**, 215 (February 22, 1971), pp. 1318-1320.
7. Arthur Lester and Eleanor Hunt, "Maternal and Child Health Program and Rural Areas," President's Commission on Rural Poverty, **Rural Poverty in the Unit ed States**, (Washington: USPGO, 1968), pp. 337-350.
8. "Infant Mortality Rate Declines," **Mississippi Health'**, 18 (August, 1975).
9. U.S. Bureau of the Census, **Statistical Abstract of the United States, 1977**, pp. 57, 69.
10. Monthly Vital Statistics Report, **op. cit.**, p. 19.
11. "Granny Midwives: Then and Now," **Mississippi's Health**, 18 (October-November, 1975), p. 6.
12. For example, if 10 people survived to age 10, and 5 died at age 12, these five would live a total of 2 x 5 = 10 years during that interval. The five who lived through age 14 would live a total of 5 x 10 = 50 years during this interval. The total years lived in this interval by those alive at the beginning of the interval would be 60 years. Five persons would be alive at the beginning of the subsequent interval. Column five also shows what the total population would be under assumptions of a stationary population with 100,000 births each year subject to the same age-specific mortality. When considering a life table it is important to remember that the ratio of survivors at any given age is not a prediction of what will happen. It is, rather, a mathematical array of what would happen to a population of 100,000 born in a given year if subject to the mortality rates for the time period for which the life table was constructed throughout their life span.
13. Paul Glick and Robert Park, "New Approaches in Studying the Lifed Cycle of the Family," **Demography** 2 (1965), pp. 187-202.
14. L.J. Axelson, "Personal Adjustment in the Post-parental Period," **Marriage and Family Living**, 22 (1960), pp. 66-70; Peter Pino, "Disenchantment in the Later Years of Marriage," **Marriage and Family Living**, 23 (1961), pp. 3-11; E. Masters, "Holy Deadlock: A Study of Unsuccessful Marriages," **Midwest Sociologist**, 21 (1958), pp. 86-91; Irwin Deutscher, "The Quality of Post-parental Life," in B. Neugarten (ed.), **Middle Age and Aging: A Reader in Social Psychology** (Chicago: Univ. of Chicago Press, 1968), pp. 263-268.
15. R. S. Cavan, "Sociologist Looks at the Older Person in the Family," in H. Jacobs (ed.), **The Older Person in the Family** (Iowa City, Ia.: Univ. of Iowa, Institute of Gerontology, 1965), p. 35.
16. Henry Hazlitt, **The Inflation Crisis, and How to Resolve It** (New Rochelle, New York, 1979) pp. 134-135.
17. Though called "insurance" for years as if the taxes were invested and the "contributor" later received a return on his invested earnings when he retired, social security has always operated as a potentially inflationary unfunded claim against future earnings. There is no such thing as a social security "trust fund" except for a minute amount of the obligations (perhaps sufficient to meet a couple of months' obligations) except as a surge tank. The so-called "investment" in interest bearing government securities is nothing more than apromise that as current workers have been taken by this most regressive tax, the government promises to tax the production of future workers when they become "beneficiaries."
18. Louis Gasper, "The Population Implosion," **Biblical Economics Today**, 1 October - November, 1978), p. 3.
19. Gary North, "The Social Insecurity System," **Ibid.**, pp. 1,2.

NEW AND EXPANDED INDUSTRY

Town	Firm	Product	No. of Employees
NEW			
Olive Branch	**American Metal Products**	Water and Gas Heating Devices	100
Mathiston	**Blue Bell, Inc.**	Apparel	200
Olive Branch	**Michelin Tire Corporation**	Tires	50
Pontotoc	**Stearns & Foster Company**	Sofas	80
EXPANDED			
Columbus	**Baldor Electric Company**	Large Electric Motors	40
Columbus	**Beloit Manhattan, Inc.**	Rubber Covered Metal Rolls	40
Starkville	**Lockport Felt Co.**	Felts	90
Verona	**Tecumseh Products Co.**	Refrigeration Compressors	12
West Point	**Sacco, Inc.**	Steel Pipe Fabrication & Erection	10

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS

[Seasonally Adjusted]

1969=100

Indicator	January 1980	December 1979	January 1979
Retail Sales	205.1	162.7	226.0
Electric Sales	196.7	203.3	202.0
Telephones in Service	221.5	220.7	211.2
Gasoline Gallonage	158.7	139.6	162.6
Loans of Savings & Loan Institutions	192.9	147.9	376.5

GOODBYE... and HELLO!

With this issue the staff of the Division of Research says "goodbye" to Carol Ward Winstead, Assistant Editor of the **Mississippi Business Review**, who resigned to accept employment elsewhere. Mrs. Winstead has been employed in the Division more than three years and was promoted to the position of Assistant Editor in December, 1977. She was a valued employee who will be missed and other members of the staff join me in wishing her continued success in her new position.

And "hello" to Donna M. Reddish who has been appointed to the position of Assistant Editor. Though she has been a resident of Starkville for several years, Mrs. Reddish hails from Newton, Mississippi, where she graduated from high school. Later, she attended Mississippi State University and Neely Business College before accepting employment with a commercial bank in Jackson. She is married; has three children; and enjoys ceramics and sewing. We welcome her to the Division of Research and look forward to working with her.

—Guy T. Peden, Jr.
Director

* * *

Natchez Pilgrimage

FIRST PILGRIMAGE AT NATCHEZ. The record of the first Natchez Pilgrimage goes back to 1789—near the birth of the nation.

That year, the bustling Mississippi territory town was visited, according to his memoirs, by Major Samuel S. Forman. He told how he toured the homes of the city, using one of the first four-wheeled carriages seen in the area.

Mississippi has seven major Pilgrimages—Natchez, March 8-April 6; Vicksburg, March 15-30; Oxford, April 18-20; Holly Springs, April 25-27; Port Gibson, March 28-30; Columbus April 11-20; Gulf Coast, April 9-20.

Source: **Let's Talk Mississippi** and **The Jackson Clarion-Ledger**.

The Dean's Corner

In the last issue of **Mississippi Business Review** the "Dean's Corner" was devoted to a summary of two of the speeches at the annual Deposit Guaranty Economic Symposium. The talks presented by Thomas A. Murphy, Board Chairman of General Motors and Robert N. Rasmus, President and Chief Executive Officer of Masonite were discussed. Both held optimistic views for the decade of the 80's. Mr. Murphy cautioned against allowing the concerns of the moment (and there are many) to cloud our outlook for the long run.

In this issue the speeches by the other participants on the Symposium program will be summarized.

Dr. Robert G. Dederick, Senior Vice President and Economist for the Northern Trust Company of Chicago, spoke on the "Economic Outlook for 1980." Dr. Dederick holds the doctorate from Harvard, and has held faculty positions at Cornell, Harvard and Boston University. He is a past president of the National Association of Business Economists. Dr. Dederick presented a non-humorous subject in a clever, precise manner punctuated by a considerable amount of dry humor. He pointed out that he normally makes very few outside talks, but that the explanation could be that he receives few invitations. The presentation consisted of seven questions which he posed, and since he is an economist, he facetiously stated that there would be fourteen answers.

1. Will there be a recession or not? Answer: Yes, or to put it in a scholarly fashion, "We are going down the tube." He gave a couple of partial explanations for this, inflation and high interest rates, and a "fundamental reason," which was stated in this witty fashion: "If we don't have a recession, we are going to have a recession." Obviously, he meant by this pradoxical statement that it seems that we shall either experience an "orderly" adjustment, brought about in part by a deliberate attempt at correction through properly conducted economic policy (monetary, fiscal, etc.) or a "disorderly one." In the latter case the recession is likely to be more severe.

2. How deep a recession will it be? The speaker said that since he was among friends that he would avoid all "ifs", "ands" and "buts" and give a straight forward answer. His answer was: "I have no idea", and he added that "neither does anybody else." However, ". . . the evidence suggests that it will fall far short of the great recession of 1973-75. The economy seems to be less vulnerable at present than during that cycle, when businessmen were taking in their own wash without realizing there wasn't anybody who wanted to come to the party they were preparing for." But there has been more caution this time. The extremely low savings rate indicates that consumer spending is still strong. [This, in the opinion of the writer, is a danger signal. The saving rate in the U. S. is perhaps the lowest in modern times, with the current rate between an 3 and 4%. It seems almost inevitable that consumers will become more conservative, and begin to try to set something aside against the onslaught of the recession now imminent. When this happens, inventories may pile up quickly, and unemployment would become a problem].

The speaker used terms to describe the forthcoming recession such as "conventional recession, a garden variety, a standard recession or the run-of-the-mill recession."

3. What will happen to inflation? "Obviously, it is going to remain at a disturbing level." The speaker could find some humor in our present plight. He pointed out that the inflation is not all bad. . ."you can live in a higher priced neighborhood without even moving." He did not believe that inflation could remain at the present incredible [for the U. S.] 13½%. The speaker apparently believes the recession will lower prices. In fact, he stated, "I never met a recession that did not lower inflation. " Recession "always cools inflation, I repeat **always** cools inflation." It may, however, take longer than it used to, but he stated that he was not too sure about that. Energy price increases, for example, were astronomical in 1979, but the speaker expects something in the range of 20-25% in 1980 [as if that were not disastrous

BEST COPY AVAILABLE

to the economy]. But when inflation has abated, it will still be high by any reasonable standards. But, the recession or no recession, workers are thinking of wage increases larger than they were last year. This attitude is reflected in the recent increases in the wage guide lines from 7% [which were not adhered to] to 8%, and steps are being taken to ease this. The writer understood the speaker to indicate an average inflation rate of 8½% to 9% for the year, and, he stated, "that may be more of a prayer than a forecast." [Of course, this was before the raw invasion of Russia into Afghanistan, which many interpret as an inevitable first step toward taking over the Persian Gulf oil fields. The increase in the federal deficit resulting from increased military outlays will likely keep the inflation rate at the double digit level.]

4. In the recession what will happen to the dollar? "Nothing will happen to the dollar," the speaker indicated. He predicted that the dollar could possibly strengthen—"against the Argentine peso." He said that to begin with "the dollar has lost its virginity—not once but a number of times." And, "while I [the speaker] do not know much about sex, my wife, who is a physician, does, and she tells me that virginity once lost is hard to regain."

The dollar has lost its virginity while the other first rate currencies have not lost theirs. And even more important there is very little likelihood that our inflation rate will allow us to match the performance in the top countries. In Germany, for example, monetary policy has been tightened because of an inflation rate of **only** 5%. The dollar will likely remain vulnerable when compared with the strong currencies, according to the speaker, recession or no recession.

5. What lies on the other side of the valley [that is, after the recession]? The answer is that it will not be a normal type recovery, rather it will be an interesting recovery. After the recession is over we shall still have a troubled economy, "after all we have dug ourselves into a deep hole; we have been doing it for 15 years." The ordinary "garden variety, run-of-the-mill recession will not get us out of it." We shall still have problems, and we shall be left with two options. One option would involve a sluggish recovery accompanied by continued high unemployment, and with slack capacity as has been the situation in Germany since the recession of the middle 70's.

Alternative number two would require controls either informal or formal, which would accommodate more defense spending and energy spending. This, too, is not a very cheerful alternative.

6. Could I be wrong? "Yes,I could be; I am almost infallible but not quite. I was wrong once in 1963." The whole world is in disequilibrium, as we all are aware. The situation in the Persian Gulf area complicates forecasts. Then too, there is the possibility of greatly increased military spending, still higher OPEC prices, gasoline rationing, serious dollar difficulties, serious financial disruption, exchange control, wage and price controls, and other events which would alter the forecast of the speaker.

7. Dr. Dederick, then, posed the last question, which was "pray tell, when is he ever going to end?" The answer was, "right now", and so he did.

One of the most interesting speakers the writer has heard in a long while was the famous physicist, Dr. Edward Teller, known among other things as the father of the hydrogen bomb. Dr. Teller is clearly one of the outstanding scientists alive today, and his talk concerned the "outlook for energy." However, as would be expected his remarks were more far reaching than this topic.

He began his talk by recounting the status of China prior to the 15th century. China had undertaken extensive exploration of the Indian Ocean as far as Africa a century before the time of Columbus and before that had made considerable technological advances. The famous wall, a fantastic achievement for the age in which it was constructed, had been built. The Chinese had invented paper, printing, gun powder, and were responsible for numerous other innovations. But around 1450 a Ming emperor decided that China should return to the "good old days", that culture and not technology should be emphasized. By the 19th century China was an underdeveloped country at the mercy of any nation which wished to exploit her. China has not yet recovered. The U.S., according to the speaker, has turned away from technology in recent years. He expressed the opinion that our young people are developing an anti-technology bias, and that this is our "China Syndrome." [He referred to a movie entitled the "China Syndrome", which had as its theme an anti-nuclear power theme.] As the result of this neglect of technological emphasis, our level of productivity has begun to fall, [and, in fact, is extremely low by comparison with all the leading industrial nations]. Dr. Teller stated that it took China 400 years to become "underdeveloped", but that if the present trend is continued that it will take a much shorter period in the U. S.

The future, if present trends are continued in the U. S., does not look promising, asserted Dr. Teller. Our efforts at solving the energy crisis are "uniformly disastrous," he said. While, he stated, nuclear energy may not be the entire solution, every effort must be made to develop this, as well as other alternatives. But solar energy, for example, is five times as expensive as nuclear energy, he stated.

In any case we must not rely on the Persian Gulf area for our energy sources, because of the political instability of the region. As he pointed out, the erstwhile most stable country now holds our embassy hostage.

With respect to the reputed dangers of nuclear energy, Dr. Teller reminded us that coal mining is a great deal more unhealthful than the use of nuclear reactors. There seems to be no doubt but that this is true. [As the writer stated in the January "Dean's Corner", we simply must overcome our neurotic fear of nuclear energy and get on with the process of developing it further before it is too late to save this nation from the certain disaster of relying on oil and gas.] The energy problem can be solved but not in the immediate future, and it looks, according to the speaker, as though we shall have to endure at least 5 years of scarcity and deprivation before anything will be done about it. It is possible that by the year 2000, the U. S. could be self-sufficient with respect to energy but not sooner.

A more serious immediate problem is the Russian threat to our security, he stated. As he facetiously put it, the ruler in Afghanistan called on Russia for help and Russia responded by helping him to enter the Moslem paradise [it will be recalled that he was immediately executed when the Russians installed the present puppet ruler]. He expressed the opinion that Russia has been ahead of the U. S. for some time in the areas of military preparedness, but that President Carter has not had the courage to admit it to the American people. For years to come we shall have to face hardship and real danger. The Russians, Dr. Teller believed, incited the occupation of our embassy in Iran, but "out of the other corner of their mouth condemned it." He made the dire prediction that the "day will not be far ahead before Russia takes over the oil fields in the Persian Gulf, either by the salami method, thin slice by thin slice, or with slices good and thick." And, moreover, he said that we do not have the military strength to resist it.

For the future Dr. Teller offered two recommendations:

(1) Use every technological means (nuclear and non-nuclear) to develop energy sources.
(2) Develop our technology as rapidly as possible, instead of emphasizing consumption. It was not with manpower, he stated, that we won World War II but with superior technology and productivity.

Also, we need to develop our defense against nuclear war; the Russians have accomplished a great deal in this endeavor, but we have not. We should rely on small nuclear weapons, using the technology (mini-systems) where we are ahead of the Russians. The nation needs, he said, captains of industry and financial leaders who can see far ahead, and we badly need such leaders in Washington. "Whether we exist as a free nation in the 1990's will depend on the election this year," and the speaker left no doubts in the minds of his audience that a change was needed in Washington. He made the observation that a pessimist may always be right, but that he "does not enjoy it," while an optimist "should not be one who lulls you into a false sense of security." Dr. Teller believes that the future is uncertain.

Following Dr. Teller's address the previous speakers, except for Mr. Murphy who had left on pressing business, assembled as a panel to receive questions and to comment on these. This session was ably presided over by C. B. Robinson, Jr., President of Deposit Guaranty National Bank. A few of these questions and responses will follow.

The question was asked of Dr. Dederick (the economist on the program) whether or not we should return to the gold standard. His answer was that we could not, that the world is too unstable to return to a fixed exchange rate system. He facetiously stated that we can do this [go onto a fixed system] only when the world does not need a fixed rate system. He was also questioned relative to the likelihood of a wage-price control system. He responded that on a scale of from 1-10, the answer would be 3. [Senator Kennedy has been advocating price and wage controls.] With respect to interest rates, his response was that the recession would ultimately bring rates down.

Someone asked Dr. Dederick, "as an economist of your philosophy, what do you invest in?" His response: "With my income, I invest in paying my wife's bills." [The writer hopes that Dr. Dederick, the speaker's wife, who also holds a doctorate does not read this article. The writer would feel badly should unfortunate consequences to the speaker result.]

Dr. Teller was asked what would be the effects of another oil boycott. His answer was that it would speed up the necessary measures we shall have to take. In answer to the question of whether or not the problem of nuclear wastes can be solved, he stated that the problem had already been solved, and that the solution had been published in 1978. He said that the Swedish Parliament had adopted the solution, and that he wished the administration in Washington could at least act with the speed of a "mili-Swede."

With respect to Jane Fonda's pronouncements regarding the Three Mile Island incident, Dr. Teller stated that he is a better actor than Miss Fonda is a nuclear engineer. In reply to a question as to what could be done to revamp education so as to offset the rebellion of our young against technology and progress, he stated that the effort must occur in the homes as well as schools. The effort must come from dedicated teachers with a love of freedom.

After the panel session, a splendid meal was served to the nearly 1000 assembled, with Deposit Guaranty as the hosts, and let it be clearly understood that more than five small fishes were consumed by the multitude.

Governor Winter was scheduled as the luncheon speaker, but at that time he had not fully recovered from his eye surgery. Mrs. Winter in a most charming fashion [much more so than the governor could have done] filled in. [It is doubtful that any governor elected to that high office in Mississippi has ever assumed his duties with more good will and support than Governor Winter.]

Following this, the audience was surprised by an appearance and performance of the reigning Miss America, who completely captivated the assembly. Thus ended the 1980 Economic Symposium, and it is to be hoped that our friends at Deposit Guaranty will continue next year this fine tradition.

—**Gaines M. Rogers, Dean**

Labor Force Data

The State's unemployment rate rose to 6.8 percent in January, an increase of 6 tenths percent compared to December's 6.2 jobless rate, according to Mississippi Employment Security Commission Executive Director Edgar C. Lloyd, Jr.

Although the 6.8 percent for the month was the same as the national rate, the national rate reflected an increase of 1.2 percent from December's jobless rate. MESC figures showed 912,000 employed and 66,700 unemployed out of a civilian labor force of 978,700. The initial unemployed insurance claims totaled 27,770 for January.

The counties having the highest rate of unemployment were Jefferson with a rate of 17.5, Sharkey with a rate of 16.7 and Tunica with a rate of 13.2.

Lafayette, Oktibbeha, and Rankin had the lowest rate of unemployed. Lafayette had a rate of 3.7. Oktibbeha had a rate of 3.6 and Rankin had an unemployment rate of 2.6.

Sixty-six counties showed an increase in the unemployment rate for January while five counties remained the same. Eleven counties had decreases in the unemployment rate for January.

	Civilian Labor Force	Unemployed	Unemployed Date	Employed
STATE	978,700	66,700	6.8	912,000
Biloxi-Gulfport SMSA	61,190	3,990	6.5	57,200
Jackson SMSA	147,300	6,430	4.4	140,870
Pascagoula-Moss Point SMSA	42,510	3,710	8.7	38,800

COUNTY	Civilian Labor Force	Unemployed	Unemployed Date	Employed
Adams	14,500	1,010	7.0	13,490
Alcorn	14,450	1,420	9.8	13,030
Amite	4,260	230	5.4	4,030
Attala	6,790	730	10.8	6,060
Benton	2,690	240	8.9	2,450
Bolivar	16,760	1,610	9.6	15,150
Calhoun	6,190	330	5.3	5,860
Carroll	3,530	210	5.9	3,320
Chickasaw	7,890	450	5.7	7,440
Choctaw	4,700	210	4.5	4,490
Claiborne	8,440	560	6.6	7,880
Clarke	7,090	340	4.8	6,750
Clay	8,750	490	5.6	8,260
Coahoma	13,830	1,430	10.3	12,400
Copiah	10,060	610	6.1	9,450
Covington	6,170	420	6.8	5,750
DeSota	22,760	1,380	6.1	21,380
Forrest	29,080	1,300	4.5	27,780
Franklin	3,300	180	5.5	3,120
George	4,900	350	7.1	4,550
Greene	3.740	220	5.9	3,520
Grenada	8,370	1,060	12.7	7,310
Hancock	6,820	440	6.5	6,380
Harrison	51,380	3,270	6.4	48,110
Hinds	117,070	5,630	4.8	111,440
Holmes	7,310	650	8.9	6,660
Humphreys	4,360	410	9.4	3,950
Issaquena	770	50	6.5	720
Itawamba	9,360	590	6.3	8,770
Jackson	42,510	3,710	8.7	38,800
Jasper	5,580	420	7.5	5,160
Jefferson	2,740	480	17.5	2,260
Jeff-Davis	4,690	380	8.1	4,310
Jones	25,210	1,400	5.6	23,810
Kemper	3,480	300	8.6	3,180
Lafayette	12,120	450	3.7	11,670
Lamar	6,880	270	3.9	6,610
Lauderdale	29,020	1,640	5.7	27,380
Lawrence	4,210	210	5.0	4,000
Leake	7,940	450	5.7	7,490
Lee	27,620	2,110	7.6	25,510
Leflore	16,690	1,510	9.0	15,180
Lincoln	12,030	700	5.8	11,330
Lowndes	22,760	1,400	6.2	21,360
Madison	11,530	730	6.3	10,800
Marion	8,970	590	6.6	8,380
Marshall	9,610	840	8.7	8,770
Monroe	13,970	880	6.3	13,090
Montgomery	4,280	470	11.0	3,810
Neshoba	9,360	630	6.7	8,730
Newton	7,210	480	6.7	6,730
Noxubee	4,510	560	12.4	3,950
Oktibbeha	13,520	490	3.6	13,030
Panola	11,320	1,340	11.8	9,980
Pearl River	11,290	860	7.6	10,430
Perry	4,380	180	4.1	4,200
Pike	12,510	840	6.7	11,670
Pontotoc	9,630	810	8.4	8,820
Prentiss	10,670	740	6.9	9,930
Quitman	4,290	460	10.7	3,830
Rankin	30,230	800	2.6	29,430
Scott	9,630	420	4.4	9,210
Sharkey	2,990	500	16.7	2,490
Simpson	8,340	370	4.4	7,970
Smith	5,430	250	4.6	5,180
Stone	2,980	280	9.4	2,700
Sunflower	12,330	970	7.9	11,360
Tallahatchie	5,310	540	10.2	4,770
Tate	7,220	900	12.5	6,320
Tippah	8,850	700	7.9	8,150
Tishomingo	10,910	790	7.2	10,120
Tunica	2,870	380	13.2	2,490
Union	8,210	490	6.0	7,720
Walthall	5,180	260	5.0	4,920
Warren	16,720	1,500	9.0	15,220
Washington	27,450	2,530	9.2	24,920
Wayne	7,630	390	5.1	7,240
Webster	4,670	380	8.1	4,290
Wilkinson	3,660	320	8.7	3,360
Winston	7,310	790	10.8	6,520
Yalobusha	5,960	310	5.2	5,650
Yazoo	8,980	730	8.1	8,250

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[1] "Mississippi Civilian Labor Force Data," **Mississippi Employment Security Commission Labor Market Data**, (1980, February), 8

MEET THE FACULTY

Dr. Louis M. Capella

Dr. Louis M. Capella is fond of teaching, counseling with students, researching, consulting, and spending as much time as possible with his family! Arriving at Mississippi State University in August, 1978, he was appointed Associate Professor in the Department of Marketing of the College of Business and Industry. There he teaches graduate and undergraduate courses, such as marketing management, marketing strategy, survey of marketing, principles of marketing and marketing research. On many afternoons, he can be found in his office, or wherever students gather, making himself available for discussions with students.

Active in research, Dr. Capella has presented numerous papers at professional meetings, including the Southern Marketing Association, Southwestern Marketing Association, Institute of Management Sciences and Midwest Marketing Association. His publications include the contribution of cases to **Contemporary Cases in Retailing**, a text which is published by MacMillan Company; and articles in the **Journal of the Academy of Marketing Science**, **Akron Business and Economic Review**, **Decision Sciences**, and others. Additionally, he has served as a marketing consultant to such projects as retail site location analyses, bank location analyses, and the demand for a mini-mall in a downtown location.

His preparation for a career in teaching, research and consulting includes B.S.B.A. and M.B.A. Degrees in marketing from Xavier University and the Doctor of Business Administration Degree in marketing from the University of Kentucky at Lexington. Prior to obtaining the Doctorate, he taught at Gannon College in Erie, Pennsylvania; Indiana State University at Terre Haute; and the University of Kentucky at Lexington.

The ultimate among his interests, however, is spending time and traveling with his wife, Mickey, and his children, Michelle, Mike and Matt.

STATE ECONOMIC INDICATORS

Indicator	January 1980[10]	December 1979[11]	January 1979[11]	Per Cent Change One Month Ago[12]	Per Cent Change One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	978,700	984,000	955,400	— 0.5	2.4
Non Ag Employment	835,900	850,300	818,400	— 1.7	2.1
Mining	9,700	9,700	8,500	0.0	14.1
Contract Construction	42,700	47,000	40,900	— 9.2	4.4
Manufacturing	229,800	232,400	233,500	— 1.1	— 1.6
Transportation and Public Utilities	41,600	42,400	39,200	— 1.9	6.1
Wholesale and Retail Trade	162,800	169,000	159,300	— 3.7	2.2
Finance, Insurance and Real Estate	33,000	33,000	31,600	0.0	4.4
Service	119,300	120,400	113,900	— 0.9	4.7
Government	197,100	196,400	191,400	0.4	2.9
Unemployment Rate (Per Cent Labor Force)	6.8	6.2	6.9	— —	— —
Average Weekly Earnings in Manufacturing	207.50	205.82	191.75	0.8	8.2
Average Hourly Earnings in Manufacturing	5.24	5.12	4.83	2.3	8.5
Average Weekly Hours in Manufacturing	39.6	40.2	39.7	— 1.5	— 0.3
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,071	3,176	3,193	3.3	— 3.8
Gasoline delivered to Dealers (gals.)[3]	129,510	110,804	130,898	16.9	— 1.1
Dairy Production					
Milk (lbs.)[4]	66,000	62,000	66,000	6.5	0.0
Egg Production[4]	134,000	136,000	140,000	— 1.5	4.3
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	16,907	19,355	28,400	—12.7	—40.5
Construction Loans	1,865	1,663	2,200	12.2	—15.2
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,795,222	1,706,520	1,795,517	5.2	—0.02
Telephones in Service[7]	1,469,340	1,463,532	1,400,985	0.4	4.9
RETAIL SALES TAX COLLECTIONS[8]	1,356,572	1,162,107	1,302,127	16.7	4.2
AGRICULTURE (ooo's)[9]					
Total Cash Receipts from Farm Marketings					
Cash Receipts from Marketing Livestock					
Cash Receipts from Marketing Crops					

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for November

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S. Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago
Aberdeen	31.5	26.0	9,446	17.6	23.4	47,548	21.8	— 2.2	— —	68,110	151,000
Baldwyn	5.3	7.3	4,621	0.3	5.7	20,743	32.1	— 7.0	— —	— —	— —
Batesville	13.5	25.4	8,590	0.4	6.6	57,579	18.6	22.4	106,200	14,000	57,000
Bay Springs	— —	— —	— —	— —	— —	20,294	0.9	1.5	— —	— —	— —
Bay St. Louis	— —	— —	13,062	0.5	8.8	38,633	39.9	17.5	82,200	86,300	219,200
Belmont	— 12.8	3.2	2,220	0.2	5.1	9,933	14.6	14.2	— —	— —	— —
Belzoni	— —	— —	4,796	0.5	6.2	27,877	13.9	19.0	— —	— —	45,584
Biloxi	— —	2.1	44,646	0.2	1.6	218,080	10.6	— 20.0	615,660	5,526,832	599,170
Brandon	— —	— —	11,390	0.7	1.3	26,105	8.8	2.5	158,000	119,000	256,950
Brookhaven	1.0	— 1.9	18,299	15.3	18.4	121,243	18.6	— 0.1	— —	— —	36,500
Brooksville	12.9	20.3	1,320	0.3	5.3	3,126	23.4	22.6	— —	— —	— —
Canton	— —	— —	10,582	0.2	4.9	72,610	21.1	5.5	239,300	66,200	33,500
Carthage	— —	— —	7,338	0.2	5.1	40,833	22.7	18.2	80,800	22,000	43,500
Charleston	— 1.3	1.5	4,067	0.7	4.6	16,445	1.3	5.1	— —	— —	— —
Clarksdale	— —	— —	20,560	0.0	4.6	125,583	26.8	5.4	428,197	465,749	83,400
Cleveland	— —	— —	14,003	0.1	3.2	102,188	25.4	12.2	— —	— —	345,600
Collins	21.9	3.16	4,585	0.7	5.6	25,074	— 24.4	— 27.5	— —	— —	— —
Columbia	— —	— —	15,464	0.2	5.2	82,965	35.1	6.4	— —	— —	— —
Columbus	9.5	15.6	33,504	0.3	4.4	243,110	30.3	2.4	396,314	811,683	182,891
Corinth	12.6	12.8	20,374	0.4	5.2	124,303	26.8	— 2.4	223,719	— —	— —
Crystal Springs	— —	— —	5,837	0.3	6.3	25,615	26.5	1.1	94,500	65,000	500
Drew	— —	— —	2,674	0.0	4.1	12,271	8.0	— 11.3	5,000	15,000	15,000
Edwards	13.2	— —	1,612	0.9	5.8	4,635	40.8	44.6	— —	— —	— —
Ellisville	11.0	— —	3,840	1.2	8.1	12,393	5.7	— 3.9	— —	— —	— —
Eupora	— 0.9	6.3	4,373	0.6	6.7	17,163	14.9	— 22.8	— —	— —	— —
Fayette	31.5	34.3	3,265	0.3	6.4	8,897	— 9.6	— 0.6	— —	— —	— —
Forest	23.8	24.5	5,062	0.7	6.5	53,556	13.4	8.1	— —	37,000	42,800
Greenville	21.1	23.5	36,461	0.2	4.7	302,309	36.9	0.2	— —	— —	— —
Greenwood	— —	— —	23,589	0.1	3.1	154,602	9.9	6.4	90,500	54,295	120,000
Grenada	— —	— —	13,963	0.2	4.8	91,826	28.2	9.9	— —	— —	— —
Gulfport	— —	— —	60,356	0.7	5.1	275,308	21.00	2.1	12,443,696	498,767	887,525
Hattiesburg	79.8	12.5	58,850	0.7	5.7	393,764	32.6	5.4	1,284,067	519,765	980,777
Hernando	— —	— —	6,959	0.4	6.3	23,525	15.3	18.8	29,000	109,000	5,000
Hollandale	41.2	26.4	3,315	0.5	5.6	13,025	21.4	6.5	2,950	1,050,000	—0—
Holly Springs	8.3	17.3	7,253	— 0.1	3.8	37,811	14.9	1.5	— —	— —	24,000
Houston	— —	— —	5,539	0.2	4.8	26,432	21.4	— 17.6	— —	47,000	295,650
Indianola	1.2	15.9	7,677	0.5	4.4	66,588	16.1	11.9	— —	— —	1,141,857
Iuka	— —	— —	5,355	0.9	11.1	30,994	28.1	25.3	— —	— —	— —
Jackson	24.0	101.6	222,522	0.3	3.9	1,553,695	40.6	8.4	9,782,558	2,916,585	8,144,789
Kosciusko	10.4	4.27	9,485	— 0.1	3.8	60,971	35.5	3.2	13,000	5,900	— —
Laurel	10.2	15.3	33,703	0.4	4.8	273,929	24.1	9.1	408,154	236,990	310,219
Leland	— —	— —	4,989	0.3	4.2	19,906	9.1	5.4	32,000	23,600	18,800
Lexington	— —	— —	4,735	0.5	5.2	19,462	9.9	12.1	— —	— —	— —
Louisville	5.0	7.2	10,488	— 0.3	3.8	51,194	15.6	— 12.1	119,000	98,000	128,000
Lucedale	— —	— —	8,127	0.7	7.1	40,396	28.8	18.8	— —	— —	68,000
Lumberton	— —	— —	2,855	0.1	2.9	8,613	7.3	9.3	— —	— —	— —
Macon	18.9	31.5	3,679	0.2	0.7	16,490	6.7	— 1.0	— —	— —	— —
Magee	— —	— —	5,245	0.6	6.0	49,756	38.3	39.0	— —	— —	— —
Magnolia	23.5	— 13.6	4,156	— 0.3	5.9	11,003	41.6	22.2	— —	— —	— —
Marks	7.5	37.5	5,422	0.1	3.7	17,635	13.1	— 3.3	— —	— —	— —
McComb	— —	— —	19,515	0.1	5.2	128,847	28.2	4.4	40,019	122,340	286,165
Meadville	1.2	— 1.3	— —	— —	— —	5,152	11.5	37.7	67,000	87,000	—0—
Mendenhall	9.7	63.8	6,479	0.4	5.9	21,586	6.6	— 2.8	12,000	26,670	10,000
Meridian	— —	— —	47,649	0.2	3.9	420,810	28.7	3.9	298,067	1,367,121	2,718,453
Monticello	40.4	54.7	4,742	1.6	7.7	18,386	10.7	6.1	— —	28,000	10,000
Morton	21.8	20.7	3,426	0.4	4.5	18,371	17.4	— 12.0	— —	— —	— —
Moss Point	15.5	20.7	16,619	0.2	2.7	52,886	18.1	17.2	209,660	446,265	117,000
Natchez	— —	36.6	29,105	0.5	5.7	231,969	20.0	12.0	203,940	311,530	440,377
New Albany	14.6	— —	11,068	0.4	5.2	57,009	17.3	— 5.7	187,700	40,000	117,000
Newton	— —	— —	4,048	0.1	4.8	23,177	18.8	— 14.5	54,400	22,800	28,100
Ocean Springs	35.2	3.3	15,672	0.6	4.6	84,088	27.6	8.3	— —	— —	— —
Okolona	14.8	— 2.2	3,392	— 0.1	4.5	14,925	18.5	— 4.3	— —	— —	— —
Oxford	— —	— —	21,331	1.4	3.9	86,962	14.1	6.7	— —	280,321	39,200
Pascagoula	— —	— —	33,996	0.5	0.2	240,012	14.9	9.9	1,378,990	930,189	773,175
Pass Christian	— —	— —	5,491	0.5	6.1	14,726	36.1	31.8	37,660	100,800	194,405
Philadelphia	— —	— —	11,377	0.3	5.5	49,463	10.2	— 10.1	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago	Current Month January	Month Ago	Year Ago
Picayune	——	——	14,973	0.8	7.4	72,434	15.3	3.4	609,342	310,000	459,094
Pontotoc	—2.2	16.3	9,189	0.2	4.1	38,477	7.6	—8.6	——	——	——
Poplarville	——	——	4,071	0.4	1.9	13,889	20.0	—4.4	265,000	30,000	——
Port Gibson	—15.8	9.4	5,657	—0.2	10.0	17,108	28.1	16.6	——	——	——
Prentiss	8.5	26.7	4,355	0.7	5.0	17,866	6.4	—1.0	——	250,000	700
Quitman	18.6	20.0	4,815	0.1	5.2	25,666	19.2	26.4	——	——	——
Raymond	14.0	30.8	3,134	1.4	8.6	10,174	16.1	17.2	——	——	——
Richton	——	——	1,956	0.5	5.7	12,466	20.3	4.9	20,000	——	117,000
Rosedale	2.2	——	1,627	—1.1	3.6	7,260	13.2	14.9	23,000	8,000	850
Ruleville	59.8	18.9	1,977	0.4	2.3	11,111	2.4	29.4	38,200	17,689	—0—
Sardis	——	——	3,471	—0.2	4.2	18,213	31.4	24.4	——	38,000	10,000
Senatobia	4.4	1.4	6,719	0.5	6.7	45,141	15.3	1.1	247,000	——	175,000
Shelby	18.0	31.3	1,675	—1.2	0.3	10,216	0.2	—6.2	——	——	——
Starkville	——	——	24,820	1.6	4.9	97,561	19.3	—4.4	6,174,402	280,000	612,000
Summit	——	——	1,601	—0.7	5.1	9,390	27.8	—1.2	——	——	——
Taylorsville	—4.0	3.8	1,753	—0.6	4.5	12,544	23.1	8.7	——	——	——
Tchula	——	——	2,011	—0.2	4.7	5,179	16.9	9.9	——	——	——
Tunica	——	——	4,237	0.2	5.3	18,927	20.0	8.5	——	——	——
Tupelo	10.9	——	37,174	0.6	5.7	317,233	21.6	3.1	——	——	——
Union	19.5	18.6	2,726	0.3	4.2	15,437	36.3	12.0	——	——	——
Utica	——	—42.7	2,969	0.4	5.7	8,656	—7.6	0.0	——	——	——
Vicksburg	18.3	22.8	38,266	0.8	4.3	207 474	30.7	4.8	846,838	184,100	363,395
Walnut Grove	——	——	1,009	—0.9	5.0	1,948	21.6	—20.9	——	——	——
Water Valley	——	——	3,972	0.3	5.2	21,139	6.4	2.2	——	——	35,000
Waynesborc	——	——	7,472	1.2	9.4	62,786	20.0	5.2	33,000	27,000	——
West Point	10.3	4.6	12,130	0.6	6.4	62,357	36.7	11.3	164,000	258,000	183,000
Wiggins	10.1	10.7	6,152	0.9	6.3	20,798	—1.9	36.4	——	——	68,150
Winona	—0.8	5.6	4,953	0.2	3.3	34,872	23.6	5.8	22,000	32,000	22,060
Yazoo City	39.3	40.9	12,112	0.2	4.4	80,516	35.6	14.5	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	January 1980[1]	December 1979	January 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA[2]					
Civilian Labor Force	147,300	148,900	140,600	—1.1	4.8
Unemployed Persons	6,400	5,900	6,500	8.5	—1.5
Per Cent of Labor Force	4.3	4.0	4.6	——	——
Employed Persons	140,900	143,000	134,100	—1.5	6.1
Non Ag Wage & Salaried	123,100	124,700	116,600	—1.3	1.8
Manufacturing	16,700	17,200	16,400	—2.9	1.8
TELEPHONES IN SERVICE	241,627	240,822	232,777	0.3	3.8
CITY SALES TAX COLLECTIONS	1,603,265	1,150,444	1,741,378	39.4	—7.9

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	January 1980[1]	December 1979	January 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA[2]					
Civilian Labor Force	61,190	60,900	59,850	0.5	2.2
Unemployed Persons	3,990	3,700	3,800	7.8	5.0
Per Cent of Labor Force	6.5	6.1	6.3	——	——
Employed Persons	57,200	57,200	56,050	0.0	2.1
Non Ag Wage & Salaried	49,190	49,080	47,960	0.2	2.6
Manufacturing	7,710	7,820	7,790	—1.4	—1.0
TELEPHONES IN SERVICE	138,998	109,931	106,628	26.4	30.4
CITY SALES TAX COLLECTIONS	508,114	482,192	565,033	5.4	—10.1

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[1] Preliminary

[2] These estimates are not comparable to any previously published data, because of revisions required by the Bureau of Labor Statistics.

Employment Covered by the Employment Security Law by County

Source: Mississipi Employment Security Commission Computation by Division of Business Research, Mississippi State University.

County	1978	% of State
Adams	14,145	1.86
Alcorn	12,712	1.67
Amite	2,008	0.26
Attala	4,674	0.62
Benton	890	0.12
Bolivar	10,717	1.41
Calhoun	3,633	0.46
Carroll	847	0.11
Chickasaw	6,909	0.91
Choctaw	1,888	0.25
Claiborne	6,232	0.82
Clarke	4,339	0.57
Clay	6,761	0.89
Coahoma	9,550	0.79
Copiah	5,716	0.73
Covington	3,060	0.40
DeSoto	10,598	1.40
Forrest	25,552	3.36
Franklin	1,238	0.16
George	2,180	0.29
Greene	1,349	0.17
Grenada	8,161	1.07
Hancock	4,619	0.61
Harrison	37,567	4.95
Hinds	112,779	14.9
Holmes	4,104	0.54
Humphreys	2,470	0.33
Issaquena	191	0.03
Itawamba	4,487	0.59
Jackson	47,282	6.23
Jasper	2,767	0.36
Jefferson	1,330	0.18
Jeff Davis	1,890	0.25
Jones	19,844	2.61
Kemper	1,350	0.18
Lafayette	9,735	1.28
Lamar	3,192	0.42
Lauderdale	24,995	3.30
Lawrence	2,405	0.32
Leake	3,464	0.46
Lee	29,380	3.87
LeFlore	19,229	2.53
Linco[illegible]	[illegible]	0.9[illegible]

Amendments to the Mississippi Employment Security Law effective January 1, 1978 brought under coverage another 32,000 workers, with wages of over $1 Billion. Due to the changes of the amendment, the % of changes are non comparable with 1977 figures.

County	1978	% of State
Lowndes	19,758	2.60
Madison	7,409	0.98
Marion	6,446	0.85
Marshall	4,730	0.62
Monroe	10,661	1.40
Montgomery	2,867	0.38
Neshoba	6,230	0.82
Newton	4,858	0.64
Noxubee	2,221	0.29
Oktibbeha	9,968	1.31
Panola	6,933	0.91
Pearl River	5,473	0.72
Percy	1,729	0.23
Pike	9,958	1.31
Pontotoc	5,288	0.70
Prentiss	6,257	0.82
Quitman	2,379	0.31
Rankin	16,125	2.12
Scott	7,415	0.98
Sharkey	2,145	0.28
Simpson	5,799	0.79
Smith	3,153	0.42
Stone	2,980	0.39
Sunflower	8,245	1.09
Tallahatchie	2,678	0.35
Tate	3,966	0.52
Tippah	4,878	0.64
Tishomingo	5,242	0.69
Tunica	1,885	0.25
Union	5,996	0.79
Walthall	2,374	0.31
Warren	14,962	1.97
Washington	22,798	3.00
Wayne	3,983	0.52
Webster	2,540	0.33
Wilkinson	2,070	2.27
Winston	5,136	0.68
Yalobusha	3,331	0.44
Yazoo	5,819	0.77
Other	32,[illegible]29	4.3[illegible]
[illegible] Total	75[illegible]144	

Amendments to the Mississippi Employment Security Law effective January 1, 1978 brought under coverage another 32,000 workers, with wages of over $1 Billion. Due to the changes of the amendment, the % of changes are non comparable with 1977 figures.

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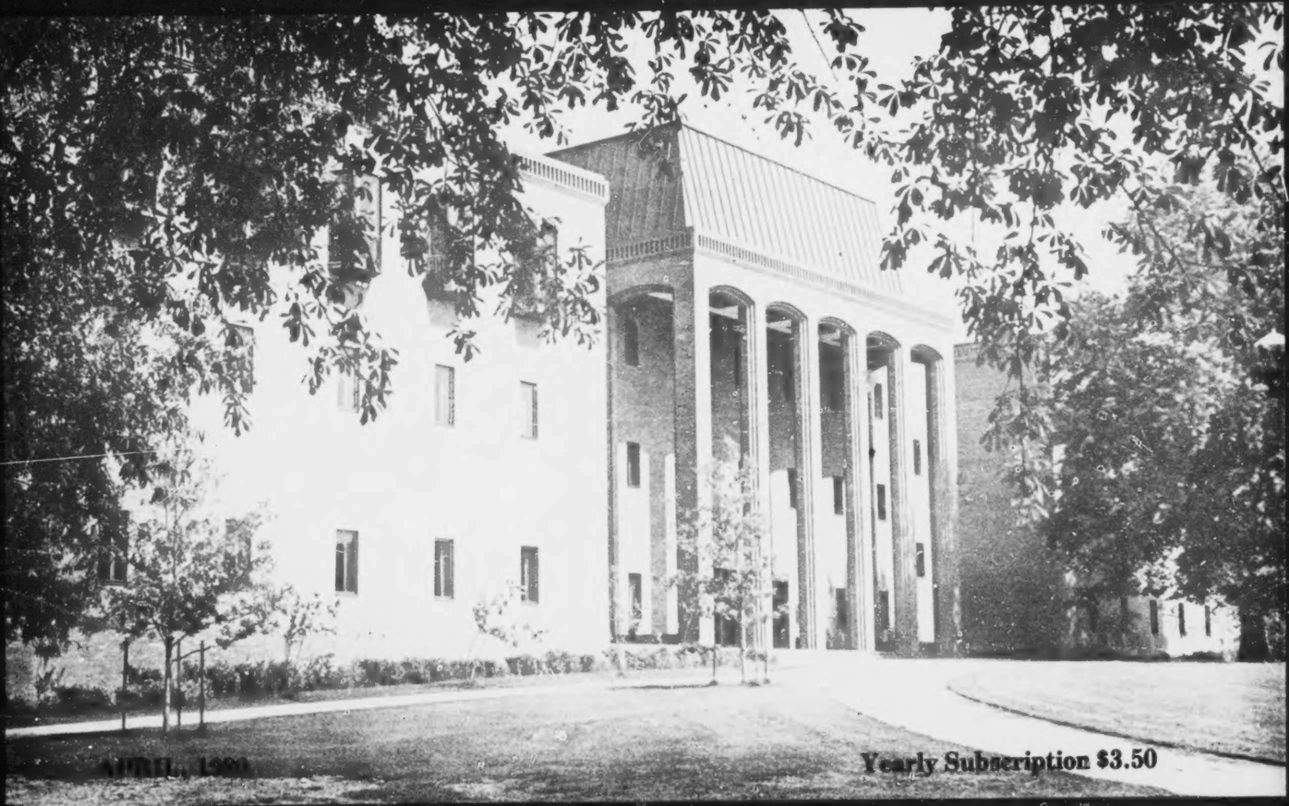
MISSISSIPPI BUSINESS REVIEW



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Elton Franklin received his B.S. and M.S. degrees from the University of Alabama and ED.D. degree from Peabody College for Teachers. He is an Associate Professor in Adult Education at Mississippi State University.

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and Associate Professor of Economics

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The Dean's Corner

The Centennial Annual Report published by Paine Webber for 1979 contained the most lucid treatment of inflation the writer of this column has observed. Mr. James W. Davant, Chairman and Chief Executive Officer, graciously consented to its reproduction. The readers of this article should benefit immensely in terms of a better understanding of inflation.

CAN WE STOP INFLATION?

"The best way to destroy the capitalist system is to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens"

Nikolai Lenin

PART I

THE DEPRESSION LEGACY

Because we believed the Depression was caused by too much production and not enough demand, programs to stimulate demand and limit production became the basis of public policy.

On September 3, 1929 the Dow Jones average peaked at 381.17. It didn't reach that level again for twenty-five years. The worst single day was October 29, Black Tuesday, when the index fell 30.57 points. Grown men cried and kicked the tickers.

It was the beginning of the longest, cruelest recession in American history. By 1933, GNP had fallen by half, corporate profits were off two-thirds and the Dow Jones industrials had lost four-fifths of their value. Fifteen million Americans, nearly a fourth of the work force, were out of work. A million had lost their homes and eighteen million were on relief.

Franklin D. Roosevelt won the Presidency in 1932 on solemn promises to keep the dollar sound and the government limited. But in fact he began an era of dizzying experimentation with the powers of government to get the economy moving. He was frankly groping. "Above all," he told his associates, "try something."

The first flurry of New Deal measures was monetary. Roosevelt declared a bank holiday, called in all the nation's gold and put a "floating" price on it. We were off the gold standard. Treasury Secretary Morgenthau would sit on the edge of the President's bed every morning and together they would set the world gold price. That was the beginning of a half century of "managed" money.

At first there was no theory behind the New Deal, only a plausible hunch—the economy was in trouble because it was producing more than people could afford to buy. "The cure," Roosevelt said bluntly, "is not to produce so much."

In this way, a strange bias began to infect public policy. Consumption was to be encouraged at all costs and production discouraged. The New Deal paid farmers to plow crops under and kill little pigs. In a kind of mirror image of today's energy "crisis," Oklahoma's Governor "Alfalfa Bill" Murray sent troops to stop oil production when the price of Oklohoma crude fell to ten cents a barrel.

At the same time, an unprecedented array of human support programs was initiated-direct relief, public works employment, unemployment insurance, old age pensions. For more than a century before that time, public policy had embodied the premise that human needs were not best met by government. Now that idea was put aside, and an unfamiliar new activist philosophy began to bring broad and direct intervention in the lives of the people.

It has become a part of a mistaken historical shorthand that the New Deal cured the Depression. In fact, the economy was as limp in 1936 as it had been in 1930.

Then a new idea began to work its way into the conventional wisdom. The Depression was not merely temporary, it was said. Rather, its persistence was evidence of a **chronic** tendency toward demand deficiency, and the economy might require periodic demand stimulants-perhaps indefinitely.

The man who gave this idea intellectual respectability was a British economist, John Maynard Keynes-Baron Keynes of Tilton. Roosevelt said he couldn't make head or tail of what Keynes was saying, and many economists agreed, but the publication of

Keynes' **General Theory** in 1936 marked the beginning of a new era.

Keynes' analysis achieved wide acceptance. At its center was the idea that the pace of the economy could be regulated by government manipulation of demand. If the economy showed signs of slackening, deficit spending would get things moving again.

The Keynesian premise was a politician's dream. Deficit spending suddenly acquired a new legitimacy. What had been an embarrassed last resort to be used only in time of war or catastrophe became—almost overnight—the accepted medicine against the system's most dreaded disability.

But, even then, Keynes had his critics—men like F. A. Hayek and the economists of the so-called Chicago school—who said that deliberate deficit spending to stir up a sluggish economy was ill-advised if not dangerous. Artificial demand stimulation would not cause real recovery, they warned, but only the illusion of it. Prolonged deficit spending would produce progressive inflation, as ever larger deficits were required to sustain the illusory prosperity. In the long run, the critics added, it would produce more unemployment than it set out to prevent.

But Keynes was unconcerned. Inflation must have seemed a remote and academic concern in a paralyzed deflationary economy. "In the long run," Keynes said, "we are all dead."

PART II

THE LONG COLD WAR AGAINST PRODUCTION

Half a century after the Crash, we still base public policy on the idea that production is the enemy of stability—that consumption should be encouraged at the expense of saving and investment.

The end of the Depression, when it came, was not a victory for economic policy, but the result of the necessity to prepare for global war. The ten-year-old prejudice against production was suddenly suspended and, in a matter of months, the system revealed its extraordinary repressed vitality.

The problems of the thirties simply dissolved. In September, 1939, there were still 9½ million unemployed—17% of the total work force. By 1944, the rate had fallen to 1.2%. In December, 1940, 1,239,000 Americans were on welfare. In the thirty months that followed, the welfare rolls fell 72% - to 354,000.

The economy's capacity to produce and the lightning speed with which it adapted to new demands were breathtaking. In 1940, the United States ranked 19th as a military power—behind Holland—and our draftees were training with wooden rifles. In less than a year, we were outproducing Germany, Italy and Japan put together. When it was all over Josef Stalin proposed a toast at Yalta: "To America's production," he said, "without which this War would have been lost."

After the war, government spending dropped precipitiously—from $95 billion in 1944 to $39 billion in 1947. Depression memories were still fresh and the old anxieties re-emerged. Economists predicted that unemployment would soon sink to Depression levels and there would be 15-20 million unemployed.

But events proved them dead wrong. In fact, the massive conversion to peacetime production took less than a year. By 1949, twenty years after the Crash and four years after the War, Detroit finally exceeded 1929 levels and produced 5.1 million cars.

But Keynesian economics was still ascendant. The miracle of American war production was widely taken to be an accidental confirmation of how successfully massive government spending, by stimulating demand, could produce full employment. Inflation was still only an abstraction—distant and unreal.

The central Keynesian premise had meanwhile been refined into a widely-accepted belief that there was a fixed, knowable relationship between government spending and unemployment. Spending levels became an instrument of economic policy, and thus spending acquired an importance wholly independent of the programs it supported. The pace of the economy could be regulated with slide-rule precision, it was thought, by a process that came to be called "fine tuning." This belief and its many corollaries were known as "The New Economics."

The new confidence that prosperity could be fiscally contrived was central to the Employment Act of 1946, which built many of the unexamined premises of the Depression period solidly into the law of the land. Certain propositions became implicit in the public policy that has prevailed ever since:

☐ Government spending is its own justification. It has merit as an economic stimulant, aside from the merits of the particular programs it finances;

☐ Programs that transfer income from savers to spenders have utility beyond their benefits to individuals—they tend to keep the economy moving;

> Production is not a problem, and can safely be ignored. It tends to follow automatically if demand is kept strong.

Keynes died in 1946, the year the Employment Act was passed, and it was decades before the long-run consequences of the policies his theories suggested became clear.

In theory, Keynesian fine tuning was supposed to work both ways. That is, if the economy began to heat up, it could be cooled down by reducing demand, by accumulating government surpluses. Deficit spending was not supposed to be an addictive economic stimulant. It was to be used only as a stabilizer and it was expected that, over time, there would be a rough balance between the deficits incurred in bad times and the surpluses piled up in good times.

But in political reality, the Keynesian analysis became simply a convenient rationalization of the politician's ancient penchant for spending public money, and public policy was emancipated from the requirement of fiscal responsibility. Deficit spending, which had been anathema before the Depression, now became an honored, permanent instrument of economic policy. And, although it was not so apparent at the time, a long-run inflationary bias was built into the American economy.

PART III

HAS DEMAND-SIDE ECONOMICS WORKED?

Demand stimulates seem to work in the short run. In the long run, they can produce accelerating inflation and undermine the economy's basic ability to provide jobs.

The United States has been, for a third of a century, a kind of Keynesian paradise. But the results have made prophets of the critics of Keynes.

In the third of a century since 1946, federal spending has increased from $55 billion to a probable $550 billion in fiscal 1980. And the rate of federal spending is gathering speed. It took 178 years for the federal budget to reach $100 billion. That was in 1962. It took only nine years more for the budget to go over $200 billion, in 1971. Four years later in 1975, it passed $300 billion. In just two more years, it exceeded $400 billion. This year it will reach $550 billion.

Government at all levels now spends an amount equal to 43% of the value of all goods and services produced in the private sector. And there have been federal deficits in all but two of the last twenty years. The cumulative total is $442 billion.

The number of people who receive some form of government support has moved from 22 million in 1950 to 79 million in 1979. There are now as many recipients of government support—including employees and pensioners—as there are producers who ultimately provide that support.

Yet not only do we not have reliable full employment, but we have eroded the economy's capacity to provide employment, and we have apparently become addicted to inflationary stimulation. "The extra money put in during depression to stimulate the economy," a critic of the new economics prophesied in 1958, "may not **at first** cause inflation, but that money will not just die. . .the piled up accumulations of years of deficits may later suddenly explode, plunging the nation into severe inflation."

Between 1956 and 1965, the money supply grew at an average annual rate of 2.3% a year. Between 1966 and 1975, the rate jumped to 6%, and the money supply is still growing at that rate.

And prices have begun to soar. From 1960 to 1964, inflation averaged 1.2% a year. By 1969, the rate had reach 6%. Controls held the tide back artifically from 1971 to 1974, but then the rate surged to 12% and, after a pause in 1976, it is rising again. A former Federal Reserve Board Chairman says that inflation has "achieved a momentum of its own."

All the while, we have continued to assume that production would follow automatically if demand were sufficient. And we have continued to pile new punishments on the savings which produce investment which produce jobs and improve productivity. Over time, the penalties we have placed on savings and investment have become the highest in the industrialized world, and we have taxed business without mercy.

A side effect of chronic inflation has been to make business appear healthier than it really is. **Real** business earnings, a primary source of capital, began to fall sharply in the mid-sixties. While earnings have increased in dollar terms, experts believe that if business made proper allowance for the higher costs of replacing equipment and inventory, they would be much, much lower.

Harvard economist Martin S. Feldstein, after adjusting reported profits to reflect inflated replacement costs, figures corporations paid taxes on $20 billion in overstated profits in 1976. In other words, although inflation obscured the reality, at least some corporations were, in effect, consuming capital—selling their tools to pay their taxes.

As anti-production, anti-enterprise, anti-savings policies have disabled business, and as chronic inflation has made alternative forms of investment seem more desirable, millions of individual investors have fled the equity markets. Individual and institutional investors alike have shifted from equity investments to debt, and corporations have had to rely more and more on debt financing—some to a dangerous extent.

The one-eyed emphasis on consumption has had another disabling effect—it has meant that regulations could be imposed on business with little concern for their cost or their effect on productivity. In 1929, there were a dozen regulatory agencies. The New Deal added eleven. In the seventies, we've added twenty, almost twice as many. The cost to business is estimated at more than $100 billion a year.

Under these assaults, capital investment began to lag. Between 1960 and the early 1970's our annual private investment averaged on 18% of GNP. By contract, Japan's rate of investment was 35%, Germany's 26%, France's 25%. Ours was the lowest in the industrialized world.

Inevitably, the rate of productivity growth began to fall as well. Between 1948 and 1954, output per man hour increased at 4% a year. Between 1956 and 1974, the rate fell to 2.1%. Between 1970 and 1974, it fell still further to 1.6%. Now, according to the Chairman of the Council of Economic Advisors, "it has dwindled to zero." For twenty years, we've had a lower rate of productivity increase than any major industrialized nation.

In other words, a third of a century of public policy built on Depression premises has produced the kind of secular stagnation it was designed to prevent and produced an inflation that may be moving out of control.

Late in 1976, James Callaghan, the Laborite Prime Minister of Britian, where "demand-side" economic theory was born, summed it all up. "We used to think," he said, "that you could just spend your way out of a recession and reduce unemployment by cutting taxes and boosting government spending. . . that option no longer exists. . .it only worked by injecting bigger doses of inflation into the economy followed by higher levels of unemployment as the next step. That is the history of the last twenty years."

"The Age of Keynes," **The New York Times** declared on the fiftieth anniversary of the Crash, "became an Age of Inflation."

PART IV

CAN WE STOP INFLATION?

Many people still believe we can't stop inflation because the only cure for it brings unemployment, and we won't pay that price. But we can have full employment without inflation.

People today believe, overwhelmingly, that inflation is our most important problem, but more than half believe there is no way to control it—that our addiction to inflationary stimulation is irreversible. In fact, the stubborn belief in the bread-line economics of the thirties—that deficit spending is the only way to prevent unemployment—has brought public policy to a dead end. Short-run and long-run policy imperatives are in apparent conflict. The short-run methods we've come to rely on to hold off unemployment now seem certain to produce intolerable inflation in the long run, and the measures necessary to stop inflation seem certain to cause immediate unemployment.

In England, these lines are very clearly drawn. The Conservative majority is pushing to reduce government spending to slow down the 16.5% annual rate of inflation. "Higher public expenditure," say the Tories, "cannot be allowed to precede, and thus prevent, the growth in the private sector needed to finance it."

But even in England, where half a century of demand-site economics has brought the economy to its knees, the Keynesian myth survives. A Labor Party spokesman warns of the danger of "wrecking the welfare state at a time when the economy needs more, not less, consumer spending power."

For almost fifty years, we have based public policy on this Keynesian error—that economic stagnation is an abiding threat in a free economy because consumption stubbornly tends to lag production. Events have discredited that proposition, but its corollaries have survived—that we can punish production freely without penalty; that tax financed social programs (one political scientist recently counted more than ten thousand) are valuable in maintaining economic stability, whether they work well or not; and that we should freely redistribute wealth to poorer people because they can be relied on to consume a larger share of it.

However, the policies which promised to prevent unemployment and stimulate growth have only substituted massive tax-consuming public employment for tax-producing private employment, while restraining growth and producing an accelerating inflation. In the longer term, at least, we need not face a politically impossible choice between more inflation or more unemployment. In time, we can have more employment without inflation if we can somehow reverse the thrust of a half century of mistaken public policy.

We do not need new public spending to support more and more people on tax-consuming public programs; we need new private investment to provide more and better jobs on tax-producing private payrolls. We do not need to stimulate consumption by inflationary defiets; we need to stimulate production by removing disincentives to saving and investment, and by emancipating business from disabling regulation.

How promptly such a policy might be effective was made clear last year when Congress passed the so-called Steiger Bill, which rolled back the maximum tax on capital gains for the first time in forty years. This provision became law late in 1978, and, in the first six months of 1979, the rate at which new stock issues were offered to the public doubled.

The rate at which the flow of venture capital quickened was even more dramatic. By 1975, the supply of private venture capital had dried up almost completely. In 1977, only $20 million was raised. In 1978, the figured soared to $215 million, most of it in the last quarter when the capital gains roll-back seemed certain. In 1979, it is expected to exceed $300 million. The New York Stock Exchange Index increased only 7.2% in the first six months of 1979. But the American Stock Exchange index—which includes the younger, smaller companies most likely to benefit from a capital gains reduction—increased 51.7%.

So even a modest reduction in just the capital gains tax—a small concession to supply-side economics—almost immediately contributed to a surge of expansion in the smaller companies which contribute most to growth—which create employment without creating inflation. Although other factors were obviously at work, coincidence alone could hardly account for these sudden, strong currents in capital markets.

Toward the end of his most influential book, **The General Theory**, Keynes himself wondered openly whether his ideas would work—whether they were properly rooted "in the motives which govern the evolution of political society"—whether "the interests which they will thwart (will be) stronger. . .than those which they will serve."

In that moment of doubt, Keynes may have come closest to prophecy. Because the issue now is not whether growth can be turned on and off at will by manipulating demand. That idea we have largely outgrown as the inflationary consequences of its application have become unmistakable. The question now is whether Keynes unwittingly popularized an approach to policy which has put the political process at war with the public interest by producing a world in which what it takes to win elections in the short run produces an inflation-ridden, intolerable long run.

COMMENTS & QUOTES ACCOMPANYING THE ARTICLE AS PAGE MARGIN INSERTS

Part I

In April, 1790, six months after the fall of Bastile, the French revolutionary government, to fill the bankrupt treasury, issued 400 million francs in unsecured paper "assignats." The advocates of the issue said there was no danger—that because the people were in control they could stop printing money whenever they wanted to.

Issues of paper money came faster and faster, as the surges of false inflation-induced prosperity grew shorter and shorter. By 1793, 6½ billion francs in fiat money had been printed. Notes warned of a death penalty for counterfeiters and offered a bounty to informers.

Successive issues of paper money, no matter how large, never seemed to be enough. Prices soared. Price controls with death penalties for violators failed to stop the chaos. In 1799, Napoleon came to power "to save the Republic."

"The chapter on the fall of the rupee you may omit. It is somewhat too sensational for a young girl."

Miss Prism to Cecily in OSCAR WILDE's "The Importance of Being Ernest"

PART II

In 1921, the German mark slid from 4.20 per dollar to 75. By the summer of 1923, it had fallen to 160,000 to the dollar. By November of that year the rate reached 1.3 trillion.

By the fall of 1923, Berlin's streets had become dangerous. The president of the Reichsbank proudly told the German Senate that by working around the clock the bank could produce 46 billion marks a day. It was widely believed that prices rose by themselves and the government had to adjust the supply of money to satisfy the demand.

PART III

Before the German inflation of 1923 was over, the mark fell to 3.8 trillion to the dollar and payrolls were hauled from the banks in wagons and carts. In its early stages, John Maynard Keynes, as part of a team of British advisors, told the German government to stabilize the mark at 3,000 to the dollar, stop printing money, and balance the budget.

The German inflation made everyone poor. It wiped out the savings of the whole middle class. An aging writer withdrew his life's savings and bought one subway ticket. People sold firewood to stay alive or paid billions of marks for cuckoo clocks or shoes that didn't fit.

Theodore A. White wrote of the Chinese inflation in the forties. "Inflation is the haunting pestilence of the middle classes. It is the hidden threat that disorganized government always holds over those who try to plan. to save, to invest, to be prudent. To be honest in one's everyday dealings in a runaway inflation does not make sense. To pay debts on time is folly, to borrow and spend as fast as possible is prudence—in China inflation made life unreasonable."

"In the long run, inflation inevitably creates much more unemployment than it was designed to prevent."

F. A. Hayek

"The collapse of the currency [in post-World War I Germany] not only meant the end of trade, bankrupt businesses, food shortages in the big cities and unemployment. It had the effect of reaching down and touching every single member of the community. . . The savings of the middle classes and the working classes were wiped out at a single blow. The result. . .was to undermine the foundations of German society in a way neither the War, nor the revolution of November, 1918, nor the Treaty of Versailles had ever done. The Revolution in Germany was the inflation."

historian ALAN BULLOCK

"Austria was successful in pushing through policies which are popular all over the world. Austria has most impressive records in five lines: she increased public expenditures, she increased wages, she increased social benefits, she increased bank credits, she increased consumption. After all these achievements she was on the verge of ruin."

Professor FRITZ MACHLUP
in an article published in 1935

PART IV

In China, prices rose 50% a year between 1937 and 1939, 160% a year between 1939 and 1941, 300% a year between 1941 and 1945. In 1946, prices doubled every two or three months. By 1948, they were doubling every day.

Chinese call loan interest rates moved from 2.16% in 1941 to 33% in 1942, to 132% in 1946, to 3600% in April, 1949. People stormed the banks to buy U. S. dollars or gold.

"Inflation has gone up over $1 a quart."

W. C. Fields

"I knew things were tough when I saw a supermarket with a recovery room."
Joey Adams

—Gaines M. Rogers, Dean

Time Utilization

Dr. Elton Franklin

Time is a unique resource. The supply is completely inelastic - 24 hours per day regardless of demand. It is totally perishable; none can be stored. We are forced to spend it and at a fixed rate. We tend to speak of time management but this is a misnomer since no one can manage the clock. However, we can manage ourselves in relation to time. This is the real problem. One of the best ways to meet this problem is to increase personal effectiveness. Peter F. Drucker, author of **The Effective Executive** and noted consultant in management, maintains that this effectiveness can be learned.[1] As he views it, time effectiveness is a set of habits; essentially, it is a practice; and like all practices, it is simple. However, it is hard to acquire because continual practice is necessary.

Keeping a daily time log is a good way to learn how we are using and misusing our time. Activities should be recorded in terms of time elapsed and results as each day progresses, not at the end of the day. Drucker says that until we find out exactly how we are spending it, there is no way to effectively plan the use of time. When we determine where our time goes, then we can start managing ourselves in relation to the clock by eliminating activities that need not be done at all, delegating things that can be done by others and, finally, by making sure that our discretionary time is in large enough chunks to have practical value. Drucker sees this as the first and biggest step toward effective use of time. He admits it is not an easy step; but unless it is managed nothing else can be managed. Effective people know what they will do, what they will do first and what they will not do at all.

The time log is a daily account of activities that often surprises. We tend to think that most of our time wasters are external forces but an honest time log usually show them to be internal. We tend to waste time in the same way each day. The log often shows another surprise—only a small portion of each work day is free or uncommitted. Much of our work is repetitive and some of these tasks could be routinized or delegated. The time actually spent on activities often differs from our estimates. Many people underestimate the time spent with visitors, the telephone, and in meetings; they overestimate the time devoted to thinking and planning.

At the end of each work day an analysis of the time log should be made. To provide structure for the evaluation, answers to the following questions should be sought:

1. Did daily goals and times for completion improve effectiveness?
2. What was the longest period of time without interruption?
3. Which interruptions were the most costly?
4. What can be done to eliminate or control interruptions?
   a. Which phone calls were unnecessary? which should have been shorter?
   b. Which visits were unnecessary? Which should have been shorter?
5. How much time was spent in meetings?
   a. How much was necessary?
   b. Could more have been done in less time?
6. Did we record "activities" or "results"?
7. Did daily goals contribute to long range objectives?
8. What steps would improve effectiveness?

We need to work smarter as well as harder; getting more work done requires planning. Planning usually involves the Pareto Principle - the significant items in a group normally constitute a relatively small portion of the total. Since we never have enough time for all things, we must set priorities. Charles M. Schwab, president of Bethlehem Steel, once confronted Ivy Lee, a management consultant, with an unusual challenge. "Show me a way to get more things done," he demanded. "If it works, I'll pay anything within reason." Lee asked Schwab to list the things that he had to do tomorrow and number them in order of importance. Then work on number one and try to complete it; next, take number two, and so on. Do this daily. After you are convinced of the value of this system, have your men try it. Test it for as long as you wish and send me a check for what you think the idea is worth. After several weeks, Schwab sent Lee a check for $25,000 and later said that this was the most profitable lesson in his business career.

People who resist planning because they "don't have time" are ignoring long-term gains plus improved performance in the short term. Taking time to plan is not easy, especially when it seems the schedule is already heavy. However, the heavier the schedule, the more essential is planning. Some people may subconsciously resist planning because it seems to take away or limit their freedom. Actually, the opposite is true; good planning adds up to more freedom. Mackenzie, in **The Time Trap**, states that the planning process involves the following essential steps:

* analyze the present (where am I now);
* develop relevant assumptions (what conditions are likely to exist);
* set objectives (what achievement is wanted);
* formulate alternatives (different ways to reach objectives);
* make and implement the decision; and
* review and control procedures.[2]

Hicks and Gullett, **The Management of Organizations**, suggest guidelines: the commitment principle - allow time for fulfillment; flexibility - no one knows exactly the future; and that higher level plans should be set before lower level plans are formulated.[3]

A cluttered desk top can confuse thinking and delay output. If we put the things we wish to remember on our desk top, every time we look at them, we remember and our thoughts are interrupted. Mackenzie makes the following suggestions for an uncluttered desk:

* Clear your desk of everything except materials related to the top priority of the moment; one important thing is enough to be working on at any one time.
* Avoid temptations to leave the top priority before completion or before you have done all that is possible.
* Recheck your priorities and start on the next most important.
* You, or your secretary, should see that your desk top is cleared of all matter except first priority for the next morning.
* Cooperate with your secretary in every way possible to keep an uncluttered desk top.[4]

Suggestions for effective time utilization are numerous and vary; however, they have been enumerated. Steinmetz and Todd, writing for supervisors, list some of them as follows:

*Review the things that have been done; see if time can be saved.
*Use shortcuts, yet maintain quality.
*Tackle tough jobs first.
*Delegate and assign all work possible
*Curiosity can be a time waster; stick with your job duties.
*Give clear and straightforward orders and instructions.
*Unfinished work is more of a motivator than unstarted work.
*Be decisive and tenacious at implementing decisions.
*Establish procedures for your absences.
*Take time out to reflect on the job and what needs to be done.
*Be punctual; set a good example.
*Maintain a list of activities to do during slack times.
*Don't waste time on the unimportant.
*Have a plan for starting the next day's work definite action.[5]

Additional suggestions are found in Lakein's "How To Use Your Time Wisely." His list includes the following:

*Consult your lifetime goals; identify activities that help.
*Carry blank index cards to jot down notes and ideas.
*Generate as little paperwork as possible; try to handle paper only once.
*Skim books quickly; look for ideas.
*Don't waste time feeling guilty about what didn't didn't get done.
*Remember that there is always enough time for the important things.[6]

FOOTNOTES

[1] Drucker, Peter F., **The Effective Executive**, New York: Harper and Row, 1967.

[2] Mackenzie, R. Alec, **The Time Trap**, New York: McGraw-Hill Book Company, 1972.

[3] Hicks, Herbert G. and C. Ray Gullett, **The Management of Organizations**, Third Edition, New York: McGraw-Hill Book Company, 1976, pp. 267-270.

[4] Mackenzie, **loc. cit.**

[5] Steinmetz, Lawrence L. and Ralph Todd, **First Line Management, Approaching Supervision Effectively**, Dallas, Texas: Business Publications, Inc. 1975, pp. 147-148.

[6] Lakein, Alan, "How To Use Your Time Wisely," **U.S. News and World Report**, LXXX, January 19, 1976, pp. 45-47.

The Parade of Mississippi Enterprise,

A Profile of a Successful Firm

McClendon Dairy Products, Inc.
Newton, Mississippi

By: Donna M. Reddish

McClendon Dairy Products, Inc., a Mississippi manufacturer of cheese and ice cream, is co-owned and operated by Mr. W. A. McClendon, President, and Mr. T. L. Thompson, Vice-President. Acting as Secretary is Mrs. W. A. McClendon and as Treasurer is Mrs. T. L. Thompson. The parent corporation consists of four divisions: McClendon Cheese Co. in Newton, M & T Cheese Co. in Uniontown, Alabama, McClendon Cheese Co. in Booneville, Ford's Ice Cream Co. in Newton and the Whey Processing plant which is a part of the cheese plant in Newton. Keeping business in the family, Mr. McClendon and Mr. Thompson use their sons in the management of two of the plants: W. D. McClendon manages Ford's Ice Cream Co. and Lanier Thompson manages the Booneville Cheese plant.

Upon graduating from the University of Georgia, Mr. McClendon worked for an ice cream manufacturer in North Carolina. Moving back to Georgia to take a position with Kraft started the ground work for Mr. McClendon reaching his dream in life, that of owning his own business.

While working for Kraft in Decatur, Georgia, McClendon was transferred to Newton to be the plant manager of the Kraft Cheese Plant. In 1958 Kraft transferred him again, this time to Dallas, Texas, to be the Southern Division Quality Control Supervisor, traveling 22 southern states inspecting Kraft plants. In the fall of 1959 Kraft officials informed him that they wanted to sell the Newton plant because they felt that it was not economically feasible for Kraft to run the plant any longer.

"Since I had a burning desire to own my own business and liked Newton, I hocked everything I had and borrowed all I could and jumped in (against the advice of a lot of people). I had lived in smalltowns and large cities and being a country boy, I wanted to rear my children in a small town," McClendon states.

The first cheese plant purchased was McClendon Cheese Company located in Newton, Mississippi. In 1960 the Newton plant was the smallest in cheese production producing on the average of 4,000 pounds of cheese a day and now it produces a maximum of 35,000 pounds of cheese per day.

In 1961 McClendon invited a former classmate at the University of Georgia and a Kraft employee to come in as a partner. Mr. T. L. Thompson became Vice-President at that time.

In 1964 they purchased another cheese plant from Kraft in Uniontown, Alabama, which is known as M & T Cheese Company. Since that time both plants have been improved and enlarged. Each of the Newton and the Uniontown plants, during their flush season (summer and holidays), can produce a maximum of 35,000 pounds of cheese per day. On the average they produce around 20,000 pounds per day. In cheese production ten pounds of milk is required to produce one pound of cheese. This supply of milk is received from Mississippi and Louisiana for the Newton plant and from Alabama, Georgia, and Florida for the Uniontown plant.

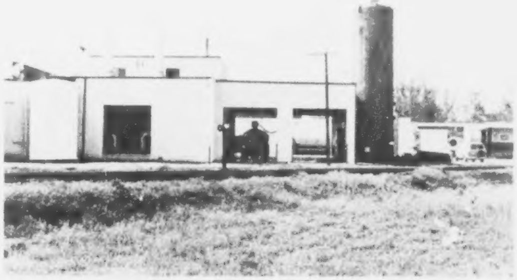
In 1967 McClendon and Thompson purchased Ford's Ice Cream Company and developed a wide distribution of ice cream throughout two-thirds of Mississippi. They supply this area with twenty flavors of ice cream, five flavors of sherbert, four flavors of ice milk, and with the ice cream novelties (such as ice cream sandwiches, push-ups, popsicles, etc.)

In 1974 the decision was made to expand cheese production with the purchase of the cheese plant in Booneville, Mississippi. The plant is known as the McClendon Cheese Company. The supply of milk for this plant comes from Alabama, Mississippi and Tennessee.

As cheese production in the McClendon Dairy Products, Inc. increased the problem of whey disposal increased. The Environmental Protection Agency has a ruling that whey can no longer be disposed of in most municipal sewage systems. Since nine pounds of whey is produced for every one pound of cheese, whey disposal presented quite a problem. The whey processing plant located adjacent to the Newton cheese plant was developed to provide a permanent method of disposing of the whey. Whey can be used in either a liquid or dry form. In the liquid form it can be used as a livestock feed, a whey-soy drink mix, liquid fertilizer, in making wine, baking bread, making salad dressing, and in candy. The liquid whey can be converted to a dry form (dubbed "pop corn" due to its shape) through mechanization. In its dry state, whey has many uses but processing has heretofore been a marginal operation as far as profit is concerned because of high equipment and energy cost.

According to a report compiled by a University of Missouri-Columbia committee more whey is being produced than the commercial market can absorb (every pound of cheese generates about a gallon of whey). Short term alternatives to this increasing problem include drying the product for swine and cattle feed as well as use as a fertilizer, while longer range possibilities are its use as a replacement for non-fat dry milk and use in candy, bakery products, ice cream, cheese foods and spreads. The whey from the Newton plant is currently sold to a feed manufacturer.

Ford's Ice Cream Company and the Main Office for McClendon Dairy Products, Inc.



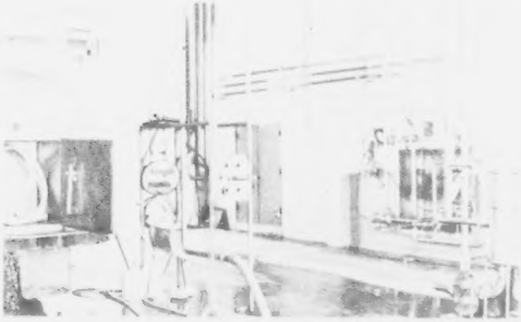
The Whey Processing Plant adjacent to the Cheese plant in Newton.

Mr. W. A. McClendon, President of McClendon Dairy Products, Inc.

McClendon states, "Our building and the condensing equipment meet USDA requirements for human consumption. We hope to develop a market for human grade whey in the future because whey is a nutritious food and can be used in many ways. To waste this food when millions are starving is immoral."

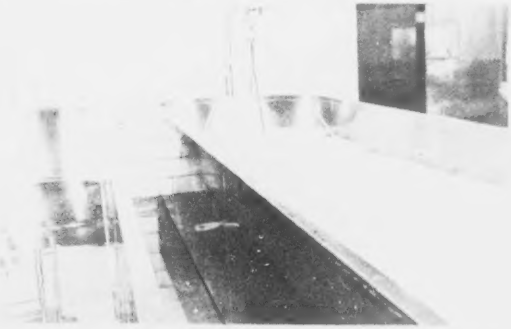
McClendon and Thompson continue to show progress. As stated above the Newton Cheese plant has increased in the production of cheese from 4,000 pounds per day in 1960 to a maximum of 35,000 pounds today. Ford's Ice Creams also continues to increase in the production of ice cream from 200,000 gallons a year in 1967 to 800,000 gallons a year today. With increased output of ice cream the number of customers has also increased from around 300 in 1967 to about 900 today. With the increases in cheese and ice cream production, the increased utilization of equipment has enabled the number of employees to remain at about the same level while drastically increasing total output of the plants.

McClendon Cheese Company

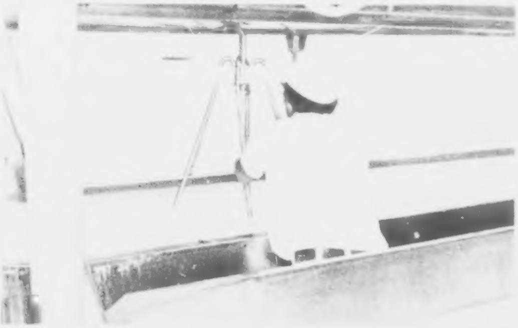


The milk is first received here in the milk receiving bay and either pumped to the cheese plant to begin the cheese making process or it is placed in one of the holding tanks.

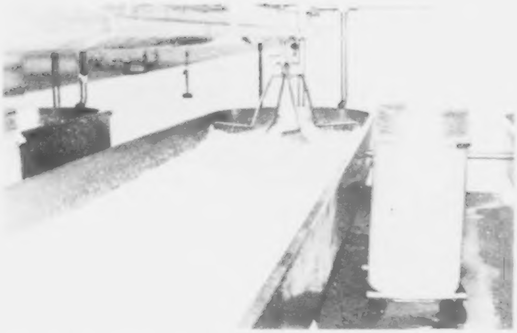
Tanks where the milk is stored and the pipes that pump the milk to the cheese plant for the cheese makers and back to the whey processing plant for condensation into the dry form.



The vat is being filled with the raw milk, to begin the cheese making process.



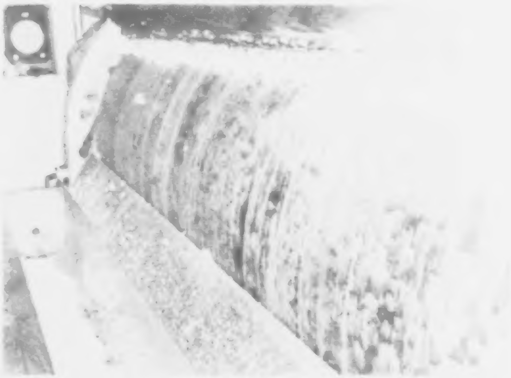
A worker is making an adjustment before starting the cooking process.



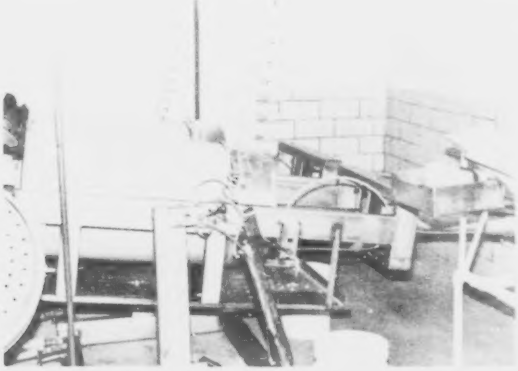
The cheese is being stirred so that all of the whey will drain off.

When the cheese process is finished, whey is pumped to the Whey Processing plant and into the evaporators used in the condensing process.

Workers are filling the 500 pound barrels with the cheese to begin the final stage of cheese making.



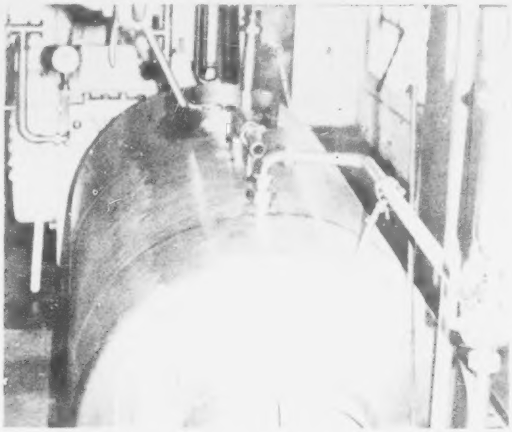
After the whey has been through the evaporators it is cooked on the big roll dryers which cook the condensed whey into the dry form which is called "popcorn".



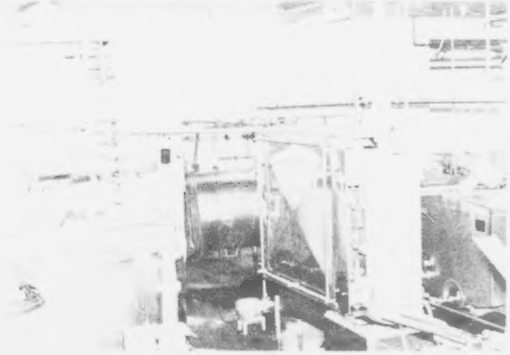
The 500 pound barrels of cheese are on the hydraulic press where the remainder of the whey is extracted.

The "popcorn" whey is then stored in burlap sacks.

Ford's Ice Cream Company



This tank produces a concentrate which is used in making ice cream.



Ice Mix processing department.

Ice cream freezers where the ice cream is frozen before packaging.

NEW AND EXPANDED INDUSTRY

Town	Firm	Product	No. of Employees
NEW			
Oxford	**C & F Construction Company**	Asphalt	25
Houston	**Dixon Creek Manufacturing Co.**	Wood Furniture Trim	10
Vardaman	**Vardaman Sportswear**	Apparel	60
Shelby	**Yarns, Inc.**	Mop Yarn	175
Batesville	**By Corp.**	Furniture	35
EXPANDED			
Louisville	**Angelica Corporation**	Apparel	20
Corinth	**Kimberly-Clark Corporation**	Correspondence & Special Papers	30
Olive Branch	**Plastic Beverage Bottle Division - Continental Group, Inc.**	Plastic Bottles	165

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	February 1980	January 1980	February 1979
Retail Sales	196.7	205.1	187.2
Electric Sales	206.7	196.7	212.4
Telephones in Service	221.7	221.5	212.4
Gasoline Gallonage	168.5	168.5	166.0
Loans of Savings & Loan Institutions	180.2	192.9	296.6

MEET THE FACULTY

Dr. Densil Y. Causey, Jr.

"Dan" Causey joined the MSU faculty in 1977 as Professor of Accounting in the School of Accountancy. His favorite teaching areas are managerial and intermediate. He enjoys tennis with his wife, Sandra, as well as playing with his two Bassett Hounds and driving around 3 acres on his lawn tractor.

A native Tennessean, he received his BBA degree from the University of Miami in 1955 and was awarded his Tennessee CPA Certificate in 1957. He finished at the top of his class for his MBA degree at Emory University in 1958. In 1963 he received his law degree "with distinction" from Emory University School of Law where he won several academic awards. After five years of law practice in Florida, he entered the Doctoral program in accounting at the University of Southern California receiving his DBA in accounting in 1972.

In addition to teaching Dr. Causey shares his time with the professional accounting community. He has written two professional development courses for the American Institute of CPA's. He is making several seminar presentations which include the AICPA in Honolulu, Seattle, San Francisco, Los Angeles, St. Louis, Baltimore, Miami, and the American Accounting Association in Columbia, South Carolina. He has also made several talks on other college campuses which have included the University of South Florida, Auburn, the University of Alabama, the University of Georgia, and the University of Florida.

Dr. Causey has published 27 journal articles and several books. One **Accounting Review** article titled "New Emerging Standards in Public Accounting Practice" has been included in a readings book in auditing and another **Accounting Review** article titled "Foreseeability as a Determinant of Audit Responsibility" has been included in a readings book on ethics.

Dr. Causey has written two text books titled **Accounting for Decision Making** and **Duties and Liabilities of Public Accountants**, which are used in several universities. Professor Ryoichi Komori of Doshisha University, Kyoto, Japan, visited Dr. Causey in the United States to consult on a Japanese translation of **Duties and Liabilities of Public Accountants** which was published in Japan in 1979.

Dr. Causey's plans for the future include writing a revised edition of one book, a new book on auditing, and a new professional development course.

STATE ECONOMIC INDICATORS

Indicator	February 1980[10]	January 1980[11]	February 1979[11]	Per Cent Change One Month Ago[12]	Per Cent Change One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	988,300	978,500	962,000	1.00	2.70
Non-Ag Employment	835,200	835,900	820,700	−0.08	1.80
Mining	9,800	9,700	8,600	1.00	13.90
Contract Construction	42,500	42,700	41,500	−0.50	2.40
Manufacturing	228,100	229,800	234,200	−0.74	−2.60
Transportation and Public Utilities	41,500	41,600	39,600	−0.24	4.80
Wholesale and Retail Trade	162,200	162,800	157,900	−0.37	2.72
Finance, Insurance and Real Estate	33,100	33,000	31,800	0.30	4.09
Service	119,700	119,300	114,300	0.34	4.72
Government	198,200	197,100	192,400	0.56	3.01
Unemployment Rate (Per Cent Labor Force)	7.0	6.8	6.8	——	——
Average Weekly Earnings in Manufacturing	209.75	207.11	192.94	1.27	8.71
Average Hourly Earnings in Manufacturing	5.31	5.23	4.86	1.53	9.20
Average Weekly Hours in Manufacturing	39.5	39.6	39.7	−0.25	−0.50
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,234	3,071	3,294	5.31	−1.82
Gasoline delivered to Dealers (gals.)[3]	125,083	129,510	120,346	−3.42	3.94
Dairy Production					
Milk (lbs.)[4]	65,000	66,000	63,000	−1.52	3.17
Egg Production[4]	127,000	134,000	128,000	−5.22	−0.78
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	19,400	17,600	27,200	10.2	−28.7
Construction Loans	2,400	1,100	2,800	118.2	−14.3
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,788,222	1,795,222	1,817,022	−0.4	−1.6
Telephones in Service[7]	1,475,050	1,469,340	1,408,861	0.39	4.70
RETAIL SALES TAX COLLECTIONS[8]	1,089,896	1,356,572	957,550	−19.66	13.82
AGRICULTURE (ooo's)[9]					
Total Cash Receipts from Farm Marketings					
Cash Receipts from Marketing Livestock					
Cash Receipts from Marketing Crops					

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for December

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S. Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago
Aberdeen	—34.5	—13.4	8,071	0.4	5.6	33,784	—28.9	7.0	38,600	——	109,900
Baldwyn	—10.8	6.1	4,630	0.2	5.9	17,277	—16.7	23.4	——	——	——
Batesville	—37.1	—10.6	8,595	0.1	6.0	40,091	—30.4	38.6	143,900	106,200	41,790
Bay Springs	——	——	——	——	——	22,178	9.3	27.1	——	——	——
Bay St. Louis	——	——	13,165	0.8	8.8	24,995	—35.3	4.8	121,200	82,200	194,130
Belmont	7.6	39.3	2,225	0.2	0.4	6,844	—31.1	— 3.2	——	——	——
Belzoni	——	——	4,824	0.6	6.3	20,762	—25.5	33.2	21,600	——	——
Biloxi	——	——	45,036	0.9	2.3	205,948	— 5.6	55.0	1,402,409	615,660	1,362,535
Brandon	25.6	— 2.4	11,450	0.5	1.3	23,980	— 8.1	26.8	404,000	158,000	359,078
Brookhaven	——	——	15,887	0.3	2.6	95,920	—20.9	42.2	——	——	——
Brooksville	—30.5	22.3	1,319	0.0	4.5	3,036	— 2.9	6.2	——	——	——
Canton	——	——	10,611	0.3	5.1	52,047	—28.3	15.8	118,700	235,300	47,650
Carthage	——	23.8	7,414	1.0	7.2	29,224	—28.4	46.6	200,000	80,800	77,828
Charleston	—28.6	6.7	4,065	—0.1	3.9	27,954	70.0	151.6	——	——	——
Clarksdale	—10.3	0.3	20,693	0.7	4.9	90,062	—28.3	8.6	277,939	428,197	129,284
Cleveland	——	——	14,042	0.3	3.4	77,445	—24.2	23.5	——	——	——
Collins	—15.9	1.3	4,600	0.3	4.8	42,357	68.9	70.8	——	28,500	——
Columbia	——	——	15,489	0.2	5.0	59,286	—28.5	6.8	—0—	14,200	——
Columbus	— 4.9	3.0	33,560	0.2	3.9	165,405	—32.0	14.2	360,810	596,314	372,020
Corinth	— 3.1	23.1	20,486	0.6	4.7	80,492	—35.3	9.3	422,210	223,719	183,264
Crystal Springs	——	——	5,839	0.0	6.1	24,951	— 2.6	32.8	40,000	94,500	79,000
Drew	——	——	2,686	0.5	4.2	10,515	—14.3	38.6	9,000	5,000	52,000
Edwards	—20.3	61.2	1,632	1.2	6.8	3,573	—22.9	10.5	32,000	25,000	10,000
Ellisville	— 0.6	52.2	3,842	0.1	7.4	11,533	— 6.9	22.6	——	——	——
Eupora	——	——	4,399	0.6	7.4	13,621	—20.6	7.0	——	——	——
Fayette	—16.8	1.6	3,277	0.4	6.7	8,096	— 9.0	— 4.5	——	——	——
Forest	—12.0	26.3	5,054	—0.2	5.5	45,869	—14.4	—26.2	——	——	——
Greenville	—22.8	22.6	36,528	0.2	4.5	206,428	—31.7	15.2	——	——	——
Greenwood	——	——	23,674	0.4	3.0	118,821	—23.1	8.4	24,540	90,500	192,500
Grenada	——	——	14,049	0.6	4.8	66,804	—27.3	13.3	123,300	79,067	217,975
Gulfport	——	23.8	60,471	0.2	4.7	209,662	—23.8	25.9	502,503	12,443,696	1,595,071
Hattiesburg	——	——	59,066	0.4	5.6	281,292	—28.6	37.8	1,348,367	1,284,067	1,479,159
Hernando	——	——	6,977	0.3	0.7	17,387	—26.1	9.6	18,000	29,000	37,000
Hollandale	——	——	3,331	0.5	5.2	9,675	—25.7	17.4	3,500	2,950	—0—
Holly Springs	——	——	7,277	0.3	4.4	31,616	—16.4	22.6	50,000	—0—	—0—
Houston	——	——	5,545	0.1	4.3	19,533	—26.1	—10.1	59,800	234,453	24,000
Indianola	—21.9	14.3	7,739	0.8	5.1	44,316	—33.5	9.1	——	——	——
Iuka	——	——	5,392	0.7	10.2	23,093	—25.5	25.0	——	——	——
Jackson	— 6.0	21.3	223,706	0.5	4.0	1,245,318	—19.9	19.7	4,292,540	9,782,558	6,439,683
Kosciusko	—11.1	11.6	9,499	0.2	4.1	43,464	—28.7	18.7	199,400	13,000	134,000
Laurel	——	——	33,882	0.5	4.8	213,615	—22.0	43.7	642,695	408,154	689,582
Leland	——	——	5,009	0.4	4.5	15,838	—20.4	16.8	66,000	32,000	94,451
Lexington	——	——	4,760	0.5	4.9	17,286	—11.2	68.8	——	——	——
Louisville	—11.2	6.9	10,518	0.3	4.0	36,099	—29.5	15.2	388,500	119,000	13,000
Lucedale	——	——	8,127	0.7	7.1	29,853	—26.1	33.0	65,000	—0—	68,400
Lumberton	——	——	2,880	0.9	3.8	6,097	—29.2	13.4	——	——	——
Macon	——	——	3,688	0.2	0.6	12,823	—22.2	— 3.2	——	——	——
Magee	——	——	5,267	0.4	6.1	31,609	—36.5	20.3	——	——	——
Magnolia	—17.0	8.2	4,144	—0.3	5.5	12,978	18.0	72.6	——	——	10,900
Marks	—19.7	57.2	5,456	0.6	4.9	14,655	—16.9	30.3	——	——	——
McComb	——	21.4	19,590	0.4	5.4	93,069	—27.8	12.6	206,100	40,019	128,000
Meadville	— 6.7	21.2	——	——	——	4,093	—20.6	—21.3	——	67,000	——
Mendenhall	—50.4	—35.3	6,501	0.3	5.9	15,653	—27.5	—13.3	45,000	12,000	262,000
Meridian	——	——	47,777	0.3	4.3	292,130	—30.1	14.7	615,426	298,067	280,909
Monticello	58.7	—15.0	4,774	0.7	7.8	15,957	—13.2	16.9	13,500	76,000	——
Morton	—23.3	4.0	3,431	0.2	3.3	15,986	—13.0	— 7.8	——	——	——
Moss Point	—16.1	22.7	16,682	0.4	3.0	37,731	—28.7	3.6	218,100	209,660	44,990
Natchez	—11.6	45.9	29,278	0.6	6.1	163,496	—29.5	22.9	81,030	203,940	226,644
New Albany	——	——	11,062	—0.1	4.7	38,619	—32.3	12.5	46,800	122,700	127,500
Newton	——	——	4,045	—0.1	3.9	18,525	—20.1	13.8	32,200	54,400	161,000
Ocean Springs	—18.1	13.9	15,705	0.2	4.7	48,473	—42.4	7.2	301,683	399,138	572,931
Okolona	— 0.4	7.8	3,384	—0.2	4.4	12,233	—18.0	33.9	——	——	——
Oxford	——	——	21,411	0.4	3.9	70,572	—18.9	23.6	45,000	——	132,200
Pascagoula	——	——	34,352	1.1	1.1	209,916	—12.5	17.0	355,017	1,378,990	421,364
Pass Christian	——	——	5,476	—0.3	3.5	9,395	—36.2	—14.6	91,150	37,660	17,895
Philadelphia	—11.8	14.7	11,401	0.2	5.3	37,096	—25.0	9.9	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago	Current Month February	Month Ago	Year Ago
Picayune	——	——	15,018	0.3	6.4	66,274	— 8.5	13.3	224,500	609,342	277,348
Pontotoc	—20.4	— 9.8	9,224	0.4	4.4	28,508	—25.9	9 0	——	——	——
Poplarville	——	——	4,068	—0.1	1.8	8,799	—36.7	—32.5	——	265,000	38,000
Port Gibson	19.8	29.2	5,694	0.7	8.9	12,872	—24.8	15.1	——	——	——
Prentiss	——	——	4,388	0.8	5.7	17,294	— 3.2	15.2	93,000	——	77,375
Quitman	—15.8	11.7	4,844	0.6	5.1	21,603	—15.8	20.5	——	——	——
Raymond	—19.6	20.8	3,185	1.6	9.2	9,102	—10.5	26.2	——	——	——
Richton	——	——	1,951	—0.3	4.9	8,670	—30.5	65.1	——	20,000	——
Rosedale	— 5.5	— 1.8	1,625	—0.1	3.0	6,047	—16.7	19.7	——	23,000	23,850
Ruleville	21.9	93.0	1,998	1.1	2.8	7,573	— 3.2	9.6	780	38,200	6,000
Sardis	——	——	3,475	0.1	4.0	13,351	—26.7	17.0	28,000	——	50,000
Senatobia	— 3.9	31.2	6,726	0.1	6.9	31,413	—30.4	4.8	5,000	247,000	57,000
Shelby	—46.9	13.8	1,677	0.1	0.4	8,040	—21.3	6.3	——	——	——
Starkville	——	—27.3	24,846	0.1	4.8	77,540	—20.5	20.8	313,000	6,174,402	218,000
Summit	——	——	1,605	0.3	4.4	7,868	—16.2	14.3	——	——	——
Taylorsville	—11.8	7.9	1,764	0.6	4.9	10,866	—13.4	11.7	——	——	——
Tchula	——	——	2,004	0.4	3.4	3,905	—24.6	53.2	——	——	——
Tunica	——	——	4,258	0.5	5.2	13,459	—28.9	— 7.6	——	——	——
Tupelo	— 7.7	13.9	37,223	0.1	5.0	219,307	—30.9	5.2	397,599	——	582,000
Union	—16.9	9.1	2,737	0.4	4.9	11,305	—26.8	17.9	——	——	——
Utica	—12.1	—41.4	2,982	0.4	5.2	7,012	—19.0	17.7	——	——	——
Vicksburg	—18.6	9.9	38,180	—0.2	3.5	149,667	—27.9	14.5	286,450	846,838	236,387
Walnut Grove	——	——	1,006	—0.3	4.0	1,302	—33.2	—20.4	——	——	——
Water Valley	——	40.5	3,996	0.6	5.2	15,567	—26.4	— 0.5	——	——	25,000
Waynesboro	——	——	7,448	—0.3	8.3	58,882	— 6.2	40.6	400,000	33,000	43,500
West Point	—10.0	13.5	12,141	0.1	6.2	39,619	—37.2	— 7.9	439,000	164,000	853,000
Wiggins	— 6.8	30.1	6,201	0.8	7.1	18,798	— 9.6	60.2	80,000	——	90,750
Winona	— 3.4	21.8	4,988	6.7	4.0	25,818	—26.0	24.8	2,900	22,000	4,000
Yazoo City	—40.2	38.5	12,145	0.3	4.7	52,993	—34.2	3.3	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	February 1980[1]	January 1980	February 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	147,900	147,200	140,600	0.5	5.2
Unemployed Persons	6,200	6,400	5,700	3.1	8.8
Per Cent of Labor Force	4.2	4.3	4.1	——	——
Employed Persons	141,700	140,800	134,900	0.6	5.0
Non-Ag Wage & Salaried	123,400	123,100	116,900	0.2	5.7
Manufacturing	17,100	16,700	16,700	2.4	2.4
TELEPHONES IN SERVICE	242,955	241,627	233,664	0.5	4.0
CITY SALES TAX COLLECTIONS	1,288,985	1,603,265	1,075,937	—19.6	19.8

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	February 1980[1]	January 1980	February 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	61,130	61,030	60,530	0.2	1.0
Unemployed Persons	3,840	3,980	3,810	— 3.5	0.8
Per Cent of Labor Force	6.3	6.5	6.3	——	——
Employed Persons	57,290	57,050	56,720	0.4	1.0
Non-Ag Wage & Salaried	49,100	49,060	48,380	0.1	1.5
Manufacturing	7,860	7,680	8,000	2.3	— 1.8
TELEPHONES IN SERVICE	110,983	110,493	111,258	0.4	— 0.3
CITY SALES TAX COLLECTIONS	425,005	508,114	310,711	—16.4	36.8

[1] Preliminary

Retail Sales Tax Revenue By County (000's)

Source: Mississippi State Tax Commission
Computations made by Division of Business at MSU)

County	1978	% of State	% of Change	1979	% of State	% of Change
Adams	11,069	2.39	8.94	11,998	2.17	8.37
Alcorn	6,187	1.33	14.98	7,064	1.28	14.17
Amite	1,024	0.22	12.28	1,147	0.21	12.01
Attala	3,073	0.66	0.04	3,462	0.63	12.66
Benton	450	0.10	8.43	583	0.11	29.56
Bolivar	7,136	1.54	10.76	7,591	1.38	6.38
Calhoun	2,059	0.44	11.42	2,338	0.42	13.55
Carroll	821	0.18	15.31	841	0.15	2.44
Chickasaw	2,525	0.54	12.07	2,795	0.51	10.69
Choctaw	761	0.16	0.13	854	0.15	12.22
Claiborne	3,385	0.73	32.43	2,287	0.41	—32.44
Clarke	1,974	0.43	14.97	2,068	0.37	4.76
Clay	3,093	0.67	9.22	3,384	0.61	9.41
Coahoma	6,654	1.44	9.78	7,155	1.30	7.53
Copiah	3,478	0.75	11.51	3,949	0.72	13.54
Covington	2,523	0.54	10.32	2,691	0.49	6.66
DeSoto	5,672	1.22	17.29	6,623	1.20	16.77
Forrest	18,452	3.98	15.31	20,586	3.73	11.57
Franklin	780	0.17	2.90	808	0.15	3.59
George	1,875	0.40	10.10	2,083	0.38	11.09
Greene	727	0.16	3.71	802	0.15	10.32
Grenada	4,556	0.98	12.19	5,172	0.94	13.52
Hancock	3,394	0.73	27.93	3,971	0.72	17.00
Harrison	32,021	6.91	13.14	35,534	6.44	10.97
Hinds	73,457	15.8	15.86	86,551	15.69	17.83
Holmes	2,772	0.60	8.37	2,955	0.54	6.60
Humphreys	1,972	0.43	10.48	2,114	0.38	7.20
Issaquena	193	0.04	46.21	138	0.03	—28.5
Itawamba	2,027	0.44	2,352	2,338	0.42	15.34
Jackson	21,042	4.54	6.97	21,275	3.86	1.11
Jasper	2,149	0.46	14.01	2,483	0.45	15.54
Jefferson	736	0.16	9.69	804	0.15	9.24
Jeff Davis	1,456	0.31	8.90	1,648	0.30	13.19
Jones	16,785	3.62	20.63	18,210	3.30	8.49
Kemper	842	0.18	23.10	880	0.16	4.51
Lafayette	4,325	0.93	10.44	4,780	0.87	10.52
Lamar	2,301	0.50	36.96	2,297	0.42	— 0.17
Lauderdale	18,152	3.92	8.83	20,324	3.68	11.97
Lawrence	1,464	0.32	16.75	1,637	0.30	11.82
Leake	2,293	0.49	12.24	2,580	0.47	12.52
Lee	15,902	3.43	12.44	18,355	3.33	15.43
LeFlore	8,634	1.86	7.59	9,616	1.74	11.37
Lincoln	5,844	1.04	13.39	6,707	1.22	14.77

County	1978	% of State	% of State	1979	% of State	% of Change
Lowndes	13,117	2.83	12.47	14,046	2.55	7.08
Madison	5,735	1.24	18.30	6,650	1.21	15.95
Marion	4,499	0.97	24.32	5,122	0.93	13.85
Marshall	2,827	0.61	9.49	3,150	0.57	11.43
Monroe	6,215	1.34	25.71	7,376	1.34	18.68
Montgomery	1,828	0.39	9.40	1,997	0.36	9.25
Neshoba	3,145	0.68	14.11	3,883	0.70	23.47
Newton	2,423	0.52	7.69	2,634	0.48	8.71
Noxubee	1,598	0.34	16.13	1,711	0.31	7.07
Oktibbeha	5,366	1.16	16.60	6,140	1.11	14.42
Panola	4,437	0.96	11.65	4,918	0.89	10.84
Pearl River	4,623	1.00	13.39	5,504	1.00	19.06
Percy	925	0.20	11.31	1,067	0.19	15.35
Pike	7,633	1.65	14.70	8,571	1.55	12.29
Pontotoc	2,331	0.50	12.23	2,702	0.49	15.92
Prentiss	3,271	0.71	11.33	3,654	0.66	11.71
Quitman	1,607	0.35	12.21	1,651	0.30	2.74
Rankin	12,108	2.61	24.68	14,390	2.61	18.85
Scott	3,958	0.85	11.56	4,561	0.83	15.23
Sharkey	1,298	0.28	10.00	1,347	0.24	3.78
Simpson	3,362	0.73	13.12	3,876	0.70	15.29
Smith	1,448	0.31	6.47	1,539	0.28	6.28
Stone	1,441	0.31	16.12	1,668	0.30	15.75
Sunflower	4,852	1.05	11.95	5,380	0.98	10.88
Tallahatchie	1,793	0.39	5.53	1,951	0.35	8.81
Tate	2,665	0.57	15.87	2,909	0.53	9.16
Tippah	2,434	0.53	12.95	2,820	0.51	15.86
Tishomingo	2,829	0.61	47.34	3,908	0.71	38.14
Tunica	1,347	0.29	5.56	1,494	0.27	10.91
Union	2,991	0.65	6.59	3,210	0.58	7.66
Walthall	1,759	0.38	12.97	1,988	0.36	13.02
Warren	10,471	2.26	8.16	12,054	2.18	15.12
Washington	15,260	3.29	11.48	17,209	3.12	12.77
Wayne	3,543	0.76	22.13	3,883	0.70	9.60
Webster	1,306	0.28	9.66	1,509	0.27	15.54
Wilkinson	1,328	0.29	10.39	1,497	0.27	12.73
Winston	2,922	0.63	13.17	3,106	0.56	6.30
Yalobusha	1,587	0.34	7.89	1,782	0.32	12.29
Yazoo	5,178	1.12	9.61	5,503	1.00	6.28
Other						
State Total	463,496			551,730		

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Frieder

Brown

Dr. Larry A. Frieder is an Associate Professor of Finance at Florida A & M University. He received his B.B.A. and M.B.A. from the University of Michigan and his D.B.A. from Arizona State University. He has considerable business experience in the Financial Industry.

Dr. Stephen W. Brown is a professor of Marketing at Arizona State University. He is on the editorial board of the **Journal of Business Research** and is President-Elect of the Southwestern Marketing Association. He is the Co-author of three books and numerous articles.

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James D. McComas, Ph.D.
President, Mississippi State University

Gaines M. Rogers, Ph.D.
Dean, College of Business and Industry

Guy T. Peden, Jr., Ph.D.
Director, Division of Research
Editor, Mississippi Business Review
Editor, Mississippi Statistical Abstract
Professor of Marketing

Robert L. Frnka, Ph.D.
Associate Economist
and Associate Professor of Economics

Leo R. Cheatham, Ph.D.
Associate Economist and
Assistant Professor of Economics

J. Larry Hagler, D.B.A.
Editorial Advisor

Billy J. Eatherly, Ph.D.
Editorial Advisor

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Editorial Advisor

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Secretary

Brenda P. Harman
Graduate Assistant

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EFT: Delayed By Consumer Resistance or Environmental Impediments?

By: Dr. Larry A. Frieder
Dr. Stephen W. Brown

Although we have been reading about the coming cashless/checkless society for almost two decades, a check and cash system continues to dominate financial exchanges. The cashless/checkless system is based upon electronics and generally referred to as Electronic Funds Transfer (EFT) systems. EFT includes a comprehensive range of financial services for both individuals and organizations. Services such as cash deposit withdrawal, transfer of funds between accounts, budget management, and automated teller machines are provided through application of electronics.

The EFT evolution has been accepted as inevitable. The technology for its implementation certainly exists, as indicated by the following observation:

> The problems are not technological. Automated clearing houses can operate and are operating smoothly. Automated teller machines—branches or free standing—are an established fact. Point-of-sale data capture has been done for credit as well as debit transaction substitutes for cash without too much difficulty. The equipment, communications, software, and plastic card technology are all here.[1]

Despite the existence of the necessary technology, there has been relatively little progress in eliminating the traditional check-cash society.

One explanation for why EFT systems have not been implemented more rapidly centers on consumer resistance. This viewpoint suggests that consumers do not want and/or need the benefits derived from EFT technology. It is argued that EFT initially developed as a result of the banking industry's need, rather than consumer demand. The basic concerns of the industry have been how to manage the increasing volume of paper processing as well as how to hold costs under control.

From another perspective, it can be argued that the slow development of EFT systems does not suggest an insensitivity to consumer needs on the part of the banking industry. Rather, the slow evolvement can be attributed to the complex nature of environmental variables (e.g., legal, political, regulatory, and economic) that interface with the industry and impair the ability of firms to develop necessary integrated programs for marketing EFT to consumers.

This article will first analyze and evaluate EFT from the consumer point of view. It will be argued that EFT can provide for real consumer wants and needs. In addition, it will be shown that most of the alleged disadvantages to the consumer are more apparent than real, given appropriate banking and public policies. The second portion of the article will focus on environmental variables which have impaired the financial industry's ability to develop appropriate programs necessary to convert EFT technology into actual financial services available to consumers. The article concludes with a look at the future of EFT systems.

Consumer Benefits of EFT

It is generally agreed that existing financial payment systems are adequate and that most consumers prefer to stay with familiar products which serve current needs. In this regard the American Bankers Association Planning Committee on the Monetary and Payment System (MAPS) stated:

> The chief results among consumers is that there is no reason to depart from checks. First, checks are not regarded as inconvenient. The amount of labor is minor, the charges are relatively low, and the cost of stamps and envelopes is hardly considered. From an objective point of view, the major benefit of a new payments system for consumers would lie in eliminating the inconvenience of checks. The fact that consumers do not regard checks as inconvenient leads to the finding that a revised payments system holds no benefit from the consumer's point of view.[2]

The fact that consumers are satisfied with the current system does not preclude the development of EFT systems. It is highly possible that EFT can meet consumer needs better than conventional mechanisms, provide additional benefits, and meet future needs as well.

EFT systems have the potential to provide the consumer with five benefits: (1) time savings, (2) convenience, (3) lower prices, (4) greater credit availability and (5) savings. The succeeding paragraphs discuss each of these benefits.

The new technology promises to save consumers a great deal of time. Where point-of-sale (POS) terminals have been employed in supermarkets the amount of waiting time to get checks approved has been reduced substantially. Also, since banking services can be provided at numerous locations away from the customer's bank (or its branches) much travel time is eliminated. These types of time savings are becoming increasingly important in our affluent society as time is beginning to rival income as a critical resource in the consumer's eye. [3]

Convenience to the consumer can be greatly increased by EFT technology. Three important types of convenience can be identified. First, accessibility to automated twenty-four hour teller machines and POS terminals effectively increases the availability of banking services from the traditional 28 hour week to up to 168 hours per week. More importantly, banking services become available at convenient times for consumers, i.e. evenings, weekends, and before and after work. Secondly, EFT enables services to be provided in a manner consistent with increasing consumer desires for one-stop shopping. Lastly, widespread use of EFT technology increases the potential number of locations in which banking transactions can be conducted from less than 50,000 to over a million.

A third consumer benefit is improved payment systems efficiency. These efficiencies, in turn, may lead to lower prices and/or greater service for the consumer. The availability of credit and lower interest rates also may be enhanced by EFT systems. Since in-depth historical information on previous financial transactions (both income and outflow) would be readily available, financial organizations would be able to evaluate credit worthiness of potential customers very quickly at minimum cost. While credit availability benefits are obvious, lower interest rates could also result from these efficiencies. Finally, EFT systems offer the potential for individuals to greatly reduce cash holdings. Accordingly, losses occurring through holdups, muggings, and purse theft should be reduced.

Despite the previously discussed benefits (summarized in Exhibit 1), EFT systems also present some potential disadvantages to the consumer. The next section discusses some of these shortcomings.

Exhibit 1

Consumer Benefits of EFT Systems

Benefits	Examples
Time Savings	Less waiting time in supermarkets. Less driving time to bank.
Convenience	Banking hours extended up to 168 hours per week. Locations where banking can be done expands to over a million.
Lower Prices	Increased efficiency resulting in cost savings to be passed along to consumer.
Credit Availability and Cost	Credit applications easier and less costly to evaluate resulting in greater credit extension and lower interest charges.
Security	Reduced cash holdings resulting in less holdups, muggings, etc.

Consumer Disadvantages of EFT

Potential consumer problems associated with EFT systems include: (1) loss of float, (2) reduction of individual privacy, (3) loss of redress for unsatisfactory goods and services, (4) loss of legal and bookkeeping benefits, and (5) increased consumer psychological stress brought about by the changes inherent in EFT technology. Exhibit 2 outlines these disadvantages and indicates suggestions for overcoming each one.

Exhibit 2

Potential Consumer Disadvantages of EFT Systems

Potential Disadvantages	Suggestions for Overcoming
Loss of float	Build float into system.
Reduction of privacy	Legislate legal safeguards; institute controls on government access
Loss of redress regarding unsatisfactory goods and services	Revise business codes and contractual procedures.
Loss of legal and bookkeeping convenience of checks	Provide descriptive statements; change legal procedures.
Psychological stress deriving from the amount of changes	Gradual introduction of changes brought about by EFT; programs to educate the consumer on the merits of EFT.

Loss of "float" is a major concern to consumers. Since EFT would enable funds to be deducted immediately from a purchaser's account, consumers would lose the specific period of credit (often thirty days) which they have enjoyed. To the extent that float evidences inefficiency and has a real social cost, the consumer implicitly pays for part of this cost. Accordingly, a more efficient payments system should reduce consumer costs. On the other hand, it is important to point out that EFT itself need not eliminate float. Float can easily be built into the system and in fact become more predictable and reliable for consumers given the controllability allowed by computers. Built-in float could be offered as an inducement to accept the new technology.

Along with a larger volume of electronic payments there will be a progressively greater amount of readily retrievable information of all types about individuals. If information on individuals becomes readily available to the business community, government agencies, and other individuals, the potential for abuse becomes obvious. This concern has become and will remain an emotional and political issue. Accordingly, it has received considerable attention in the courts, in Congress, and in study commissions. The advisory Committee on Automated Personal Data Systems has recommended legislation to assure the following personal data system safeguards:

1. There must be no personal data record-keeping systems whose very existence is secret.
2. There must be a way for an individual to find out what information about him is in a record and how it is used.
3. There must be a way for an individual to prevent information about him that was obtained for one purpose from being used or made available for other purposes without his consent.
4. There must be a way for an individual to correct or amend a record of identifiable information about him.
5. Any organization creating, maintaining, using, or disseminating records of identifiable personal data must assure the reliability of the data for their intended use and must take precautions to prevent misuse of the data.[4]

The National Commission on Electronic Fund Transfers has taken the privacy threat most seriously. The Commission concluded that EFT systems necessitate much stricter controls than now apply to government access to an individual's financial records. Although the privacy concern is serious and difficult, it is clear that major efforts are in motion to minimize potentially harmful consequences.

A third disadvantage arises from the loss of redress when the consumer is faced with unsatisfactory goods and services. Under the current banking system, the consumer of substandard goods and services is able to exercise leverage against the seller by withholding payment on credit balances. EFT effectively eliminates this tool for the buyer by shifting consumer debt to the financial institutions. Thus, consumer debt legally stands irregardless of dissatisfaction with the goods purchased. This issue appears to be amenable to study by the groups involved. Such an investigation should generate an equitable process requiring changes in business codes or contractual procedures governing exchange relations between merchants, consumers, and financial institutions. Similarly, provisions for consumer redress could be constructed to handle false billings and other errors which consumers may experience.

The potential also exists for a loss of bookkeeping benefits. Although consumer record keeping is geared toward the return of checks, it can be easily demonstrated that a single descriptive statement from the bank can provide the same (or even greater) data for accounting purposes. Since the legal system and the commercial process is also geared to check return, it is again appropriate that codes of business conduct and legal procedures be modified to facilitate EFT.

Finally, implementation of EFT will necessitate considerable change in the manner in which the average consumer transacts business. EFT suggests that the consumer must adjust to new services, different loctions where transactions and payments take place, and altered pricing arrangements. Moreover, adjustments may have to be made for different "float" lengths, business procedures, and laws. In total, this might be too much change to subject the consumer to in a relatively short time period. However, the consumer does not have to be subjected to all of these changes at once. Most of the changes noted have been introduced gradually and always with choices available to the customer. Also, programs can be developed to alleviate the psychological stress concomitant with subjecting the consumer to these changes. Specifically, programs can educate the consumer about the merits of changes emanating from EFT.

The preceding discussion indicates that each disadvantage or problem with EFT systems is not so serious that it will or should stop its eventual implementation. Each shortcoming was found to be controllable in the sense that action could be taken to overcome the disadvantage. Marketing programs, for example, can be undertaken by businesses to assure that these perceived problems do not become a reality.[5]

There are other relevant societal trends which are conducive to the acceptance of EFT systems. First, society in general has become increasingly mobile and convenience oriented. EFT facilitates mobility and provides convenience. Second, large numbers of young, educated people in the country are receptive to beneficial change. Third, electronics, communication, automation, and advanced technology have become part of the American culture. In view of this, EFT represents a natural evolvement of a technologically oriented society.

Environmental Constraints To EFT

While the consumer resistance to EFT systems can be overcome, more serious environmental constraints hamper the financial community's ability to implement such systems. Significant political, legal/regulatory, economic, and technology variables present barriers to converting EFT technology into everyday business practice. Before examining each of these variables, it is important to consider the general environment setting existing in the financial industry independent of EFT developments.

The Report of the President's Commission on Financial Structure and Regulation (Hunt Commission) has been available since December 1971. This report made recommendations which, if implemented, would radically change the functioning of the private financial system. The basic thrust of the report is to allow all deposit agencies the opportunity to offer a wider range of services and compete on an equal basis in the same markets.[6] This proposal would completely eliminate what have historically been protected or compartmental markets of banks and savings and loan associations. Despite the recommendations and the widespread belief that they will eventually be implemented, Congress has yet to finalize any form of legislation proposed by the Hunt Commission. The obvious result is a high level of uncertainty regarding the future nature of competition and regulation which will exist in the financial industry. This uncertainty contributes to the complexity of the individual environmental variables discussed in succeeding sections.

Competitive Rivalry

The proposed legislation emanating from the Hunt Commission and issues deriving from EFT technology will significantly affect three types of competitive rivalries. First, EFT revives the long standing fear held among small banks of larger banks entering their local markets via EFT. Second, the banking industry and the savings and loans have become direct competitors through EFT applications. Both industry groups wish to protect their markets from EFT inroads by the other. Third, the financial industry is very concerned about the boundaries established in regards to the ability of supermarkets and department stores to conduct financial business. Each of these three rivalries have been and will continue to be heavily discussed in the political arena.

These rivalries coupled with the politization of the consumer interest form the key inputs into any legislative and regulatory action taken regarding EFT systems. Since economic interests of considerable magnitude are at stake, legislative deliberations promise to be lengthy and hard fought. Until these battles are resolved, it is nearly impossible for potential EFTparticipants to determine what products or services are legal, what constitutes the target market, what is the competition, and what channels of distribution are legal. It is clear that uncertainty with respect to issues as fundamental as these represent interindustry sharing (e.g. between banks and

Legal/Regulatory Issues

Legal and regulatory issues are critical to the structure of financial markets because entry, exit, allowable products, and some prices are determined by regulators and other government bodies. Since EFT systems affect many of these factors, their form will be influenced by the decisions of Congress, state legislatures, regulators, and the courts. Although Congress has not acted on EFT legislation, state legislatures have been busy in passing statutes. The states have taken a variety of stances as to whether customer-bank communication terminals (CBCTs) are branches or not. State laws regarding sharing of CBCTs vary considerably. The Comptroller of the Currency ruled CBCTs are not branches but the Supreme Court declared this ruling invalid. State courts have also joined the fray and have issued differing opinions. With Congress delaying legislation, the upshot of these inconsistent developments is the evolving of a fragmented structure.

EFT has raised an important competitive issue which requires definitive rulings. The issue of sharing arrangements between two or more firms has yet to be resolved. On one hand these arrangements allow scale economics and the achievement of necessary capital requirements. However, sharing can also easily lead to anti-competitive behavior. This issue is compounded by the fact that not only must legal decisions be made regarding banks sharing, but interindustry sharing (e.g., between banks and savings and loans) must also be legally determined. Furthermore, legal and regulatory rulings are still needed to determine when and/or if actions by nonbanks (retailers and savings and loans) constitute "doing banking".

The ownership of terminals, clearing networks, and payment processes are also at issue. The legal and regulatory rulings in this regard will determine the distribution of control, management, maintenance, and liability. Will financial institutions be able to offer products to the exclusion of others? Will retailers have the option of owning terminals and interconnecting with payment systems of their own preference? Will accessability to a terminal be a private or legislative decision?

Clearly, there exists a very uncertain, changing legal environment. This uncertainty makes private investment in EFT very difficult in that the nature of the product a firm may wish to offer may be modified or declared illegal ex post. The legal and regulatory environment also impinge on where and how the product is placed on the market. A competitive strategy to offer a differentiated service or increase market share could be upset by ex post legal-regulatory action.

Economic Considerations

Economic factors also impede EFT development in that the systems require substantial capital expenditures. Giese has identified numerous cost factors involved in getting into EFT.[7] These factors are outlined in Exhibit 3.

Exhibit 3

Cost Factors Involved in EFT Application

Representative Component Cost Factors

Terminals
Local terminal controller
Space or land
Building and installation
Security systems
Communications lines and equipment
"Front-end" communications computer
Central computer center, equipment, personnel, space and overhead
Message switching center

Representative Project Development Costs

Management planning and control
Software design and development
Operations preparation
Testing and conversion
Customer conversion (corporate)

Representative Annual Operating Costs

Data-processing expenses
Communications lines
Maintenance of terminals and equipment software
Operation maintenance
Forms and supplies
Management and personnel (operating personnel excluded)

Adapted from: Giese, Paul E., "How To Figure The Cost of Getting into EFT." **Banking**, November 1975, p. 102.

Given the large fixed investment of EFT applications, cost effectiveness is dependent upon volume usage. Market segmentation strategies in turn are often not feasible in that the volume of a particular segment is not great enough to generate a cost effective level of usage. Similarly, the diffusion of EFT technology could easily result in a low number of users per seller. This low patronage could contribute to significant losses in the early stages of development. The necessity of volume usage is evidenced by the conclusion of the National Commission on Electronic Fund Transfers:

> Much of the literature on the economics of EFT developed over the past decade suggests that the cost of EFT transactions at the point-of-sale (POS) and at automated teller machines (ATMs) will be lower than the cost of corresponding transactions in the checking system if the EFT systems can achieve substantial volume. Such estimates, however, were derived solely from engineering and feasibility studies, and had not been tested in application. The Commission's empirical study, which provided a basis for testing these conclusions in a market context, found no evidence that contradicted these conclusions.[8]

Even when volume is substantial and EFT results in economic efficiency, the current fee system does not provide adequate charges to the consumer of use of the service. Furthermore, with the service essentially free of charge, the consumer has no incentive to use a more efficient system. Thus, a rationalized charge system in which consumers earn interest on deposits and are charged explicitly for transactions must evolve to achieve efficient utilization of resources. It is believed that depository institutions will eventually have to pay interest on demand deposit accounts and this requirement will force such a rationalized charge system. But until this evolves the real costs and benefits of services are not communicated to customers.

The allocation of costs and benefits between the sponsoring and sharing financial institutions, commercial user outlets (retailers), and customers is a very difficult problem. Since little cost accounting and few negotiations exist to provide an experience base, potential providers of EFT are uncomfortable and insecure in adopting the new technology. For example, fundamental agreements must be made between financial institutions and supermarkets compensating the former for reducing bad check losses and compensating the latter for performing banking work functions. Since costs and benefits to each of the participants involved are dependent on unannounced legal and regulatory rulings, it is difficult to envision the emergence of the requisite economic relationships prior to political-legal actions.

Technological Factors

Technological considerations may require that investors in EFT consider their interdependence with other related systems. For example, retailers may have computers which are designed to monitor sales patterns, inventory needs, and credit policies. It is essential that any EFT system offered by a financial institution be consistent with the electronic system developed for this retailing environment. Also, since one financial firm usually represents only a fraction of a store's customers, most retailers require that any proposed EFT system be integrated with those of other financial institutions.

Institutions making large EFT investments may find subscription to their correspondent EFT services critical to achieving necessary economies of scale. After a great deal of effort in building such a network, it is entirely conceivable that various subscribers could be offered a more sophisticated technology to either use individually or through subscribing to another group. This dynamic technological environment causes institutions to be reluctant in making EFT investments, and potential subscribers are hesitant to agree to an alliance with any EFT offering on a permanent basis.

Given the uncertain nature of the legal and regulatory environment, it is possible that market boundaries of a particular institution's EFT applications may change. Such adjustments may render a recently implemented EFT application obsolete. These technological factors affect the decision to invest in EFT, the type of product or service to offer, and the nature of the delivery network to the consumer.

The preceding discussion indicates the uncertainty a financial firm faces in considering the conversation of EFT technology into actual practice. Each of the variables discussed impair the ability of the firm to conceive the nature of the product or service to offer and what channels of distribution are possible and/or appropriate. Without precise conception and understanding of a potential product offering and the appropriate channels of distribution, it is difficult to formulate a complete program necessary to implement any new EFT application.

Conclusion

Despite publicity to the contrary, we are not approaching a checkless, cashless society. Instead, our financial environment is gradually evolving into a check-cash system augmented by electronic funds transfer services.

Even though electronic systems can provide the consumer with substantial benefits, important steps must be taken before EFT receives widespread implementation. Specifically, political-legal actions must be made to alleviate the present state of uncertainty regarding the competitive, economic, and regulatory climate pertaining to EFT systems. Until these uncertainties are resolved, the institutions capable of offering EFT services are unlikely to proceed in an aggressive fashion.

FOOTNOTES

1. Peter D. Louderback, "Electronic Funds Transfer Systems," **World**, Peat, Marwick, Mitchell & Co., Spring 1975, p. 14.
2. American Bankers Association, **Executive Report of the Monetary and Payment System Planning Committee**, Washington, D.C., 1971.

(Continued Page 12, Col. 2)

The Dean's Corner

The odds are increasing that we shall all be thrown into the VAT. The Value Added Tax, an indirect tax, levied at all stages in the production and sales of goods and services has for some time been seriously considered by Congress as a significant source of revenue. Why, with a proposed budget for 1981 of $616 billions it would be necessary to cover additional expenditures with massive new sources of revenue, goes beyond the comprehension of most of us. Clearly the federal government should be reducing expenditures and retrenching its activities, instead of seeking still more sources of additional revenue. Government in the U. S. is now taking about 43% of the GNP. Try to comprehend the enormity of this development. In a system such as ours is supposed to be, the public sector now commands nearly one-half of the entire GNP! Unbelievable! It took 170 years for the federal budget to reach $100 billions in (in 1962). It now appears that an additional $100 billions is being added about every 2 years. This is the fiscal quagmire into which Congress has led this nation by yielding to one pressure group after the other, with a consummate disregard for the overall welfare of the nation. And now it appears that we are about to stumble into the VAT to provide still more funds for Congress to ladle out.

Let us take a look at this proposal. It is not a new concept; it has been considered from time to time in this country, but it has never received sufficient support in Congress for its adoption. However, it is an accepted tax in Europe, and the EEC requires it of member nations. Basically, it is an indirect tax, such as a sales tax, but unlike the sales tax it is collected at each transaction all along the line from the seller of raw materials to the final retail sale, not just at the point of retail sales.

In general, the value added tax (VAT) is levied against the value added by each firm involved in the production and distribution of the product. To illustrate, assume a simple example involving the purchase of cloth by a men's suit manufacturer for $50. The suit is made and sold to a men's store for $105 (cost of material: $50, value added: $50, VAT: $5). The store then sells the suit for $160 (its cost: $105, value added: $50, VAT: $5). In this oversimplified case, the total value added in the two stages was $100, and the total VAT was $10. The VAT would superficially resemble a federal sales tax. "In fact, the American Institute of Certified Public Accountants favored a national sales tax over a VAT in a 1975 statement of Tax Policy." (**World**, Peat, Marwick, Mitchell and Co., Winter 1980, in an article by Neil B. Glenn and Jack B. Anderson.) Actually, the tax is also similar to a proportional gross receipts tax, the value added (VAT tax base), being essentially the difference between total receipts and total cost of purchases from other firms. In any case it would mean superimposing an entirely new tax on an already burdensome structure. The VAT is not thought of as entirely replacing any present taxes, merely supplementing them.

It is true that our present federal tax structure which over-emphasizes income taxes tends to discourage capital accumulation. It also leads to inequities resulting from double taxation, and places extremely heavy burdens on the middle income class because of such things as tax avoidance and evasion by a substantial portion of the public. Double taxation takes such forms as taxing corporate income under the corporate income tax and then again taxing the same income as it is distributed to the firm's owners in the form of personal income tax on dividends received. Also, individuals pay income taxes on savings as a part of total income taxation and again on interest received from savings. Instances of tax avoidance by the extremely wealthy are numerous, and evasion through "underground operations" (no records kept) are becoming more prevalent. It has been estimated that as much as 25% of income is now "underground", and is not being taxed.

Congressman Al Ulman has proposed a VAT (Value Added Tax) which he claims will alleviate some of the above weaknesses of the present structure. In an article in the Peat, Marwick, Mitchell and Company publication, **World**, Winter of 1980, ("Does America Need VAT?—Yes") Congressman Ulman outlined his proposed tax reform bill which would reduce annual social security taxes by $52 billions, personal income tax by $50 billions, and corporate income taxes by $28 billions. He did not, however, propose to reduce expenditures by a like amount. Quoting him, "offsetting $130 billions tax cuts with matching spending cuts would create severe economic and social disruption, as well as commit Congress to a small civil war over what programs should be cut back or killed." At this point the writer of this article disagrees with the congressman. The disruptive effects of reduced expenditures would likely be no greater than the devastating effects of the current inflation which has been caused largely by excessive federal expenditures. However, everyone, according to the congressman would pay his or her share, including those involved in "underground" operations. But, he states in the article that "A VAT can be shaped into a fair tax", and herein lies the rub. There is a distinct possibility that in the process of "shaping" the tax it will result in a situation where the middle income group will bear the burden just as is true now. Those most benefiting from government expenditures will pay less. He stated that "the Americanized VAT would place a lower tax rate—or perhaps no tax at all—on vital human necessities." Also, since the very wealthy spend only a part of their incomes, they too, would get off lightly. He also pointed out that a substitution of VAT for income taxes would tend to reduce government expenditures, since at present, income taxes tend to increase faster than real incomes (inflation forcing people into higher brackets with no real changes in incomes). This argument would assume that federal expenditures are subject to tax collection restraints, a rather naive assumption based on past performance. An export incentive would also result from substituting VAT for business taxes, he claims. The VAT tax on exports under his proposal would be rebated, giving exporters an edge, while imports would be subject to the tax. The American consumer would not likely benefit from this. **Imported** automobiles, for example, are about the only thing saving the American consumer now from being made hostage by the Automotive Workers Union. He also maintains that savings and investment incentives resulting from the tax—"will give us the economic muscle to control inflation and restore productive growth." Perhaps, but only if the government will use restraint in expenditures, and monopolistic unions can be brought under control.

In the article by Neil B. Glenn and Jack B. Anderson (**World**, op.cit) the advantages and disadvantages of the VAT were discussed. It would, perhaps, be helpful to summarize these, especially in view of the fact that these two Peat, Marwick and Mitchell tax experts seem to have a fine grasp of the value added tax. They treat as advantages of the tax such things as the beneficial influence on capital accumulation, to the extent that this tax would reduce the reliance upon income taxes. The high income tax rate and double taxation discourage savings and investment, whereas the VAT, which is a tax on consumption would tend to encourage savings. Another advantage is that this new revenue source would reduce the need for deficit financing, and therefore, remove a substantial cause of inflation. (This would, of course, be true only if the government did not further expand expenditures, and eliminate these advantages. Should Congress follow its previous irresponsible budgetary patterns, this advantage of adding VAT would, indeed, be questionable.)

Another possible advantage listed by Messers Glenn and Anderson is that government revenue derived from a tax on consumption would be more stable than that derived from income taxation, which is subject to more fluctuation, and is more sensitive to changes in the business cycle. This should enable the federal government to plan in a more orderly fashion the budgetary process. (It is highly unlikely that this will occur until pressure groups cease to determine legislation.)

Another advantage claimed is that the VAT will be "neutral" in terms of having causal effects on economic decisions. For example, as has been pointed out in the "Dean's Corner" on several occasions, income taxation favors debt as opposed to equity capital. That is, the rental on capital, if called dividends, is not tax exempt but if it is called interest, it is entirely tax exempt. Since the typical corporation uses its capital structure to finance its operation, it basically makes little difference in which form it appears—debt or equity. But, in terms of fiscal soundness the corporation with a large equity base can more nearly weather financial adversity than one heavily in debt. The VAT would eliminate this bias in favor of debt. Also, such things as how to handle depreciation on capital outlays for tax purposes, which seems to be a more constant source of concern, would cease to be a problem.

Also, as indicated in the Glenn and Anderson article, VAT may lead to more efficient business operations with lower costs to consumers than is the case with the current heavy taxation of income. Since costs are deductible there is not as much incentive to cut costs as would be the case with VAT, which is more nearly a gross income than net income tax.

Quoting from the article: "This income tax incentive is an inducement to wasteful spending." One wonders, for example, just how careful the oil industry will be to keep down costs, with an even heavier tax on its "windfall" profits.

An additional advantage of VAT is the potentially greater ease and expense in administering the tax. However, with the "adjustments" to the tax as already proposed by Congressman Ulman and other "adjustments" which will surely follow, it is doubtful that this claimed advantage will be realized. Moreover, VAT will **not** replace the corporate income tax, and so it would represent another set of compliance and reporting problems on top of the already burdensome ones.

Still another claimed advantage is that VAT will bring more balance to our tax structure which places an inordinate burden on income taxation. Glenn and Anderson state: "The U.S. reliance on income taxes is higher than that of any western country and its reliance on consumption taxes is lower than that of any other major western country." This, no doubt, contributes to the constant demands for still greater federal expenditures by those who pay little or no income taxes. Provided the VAT is not "hidden", it is possible that by paying somewhat more by way of their share of taxes, this group would become less insistant upon the government following its recent "pie-in-the-sky" approach to expenditures. However, the widespread use of sales tax revenues at the state level for such expenditures has seemed to weaken these strong demands but little. The fact is that those paying the least taxes are always the greatest demanders of services and handouts.

The two tax experts considered at length the disadvantages of VAT. "VAT would permit government to expand beyond its present encroachments on private and corporate life and expand even further the burden of taxation." The writers add: "permeative government encroachment has reached a point of saturation in modern American life. Further enroachment is intolerable." These statements represent a realistic appraisal of the unfortunte status of federal government in the U. S. today. There is almost certainty in the mind of this writer that Congress would not reduce other taxes but would, instead, further expand federal government activities. Already certain members of Congress are claiming that reduced federal expenditures would have little effect on inflation, and President Carter has already begun to assure various groups that they will not be made to suffer from reductions. Senator Kennedy has been making noises about putting the burden of inflation fighting "on the backs of the poor." The burden is and has been on the tax payers—not those who pay no taxes. The arguments against the tax include the fact that the tax would be regressive. That is, those with lower incomes would spend a disproportionate part of their income and, therefore, a larger percentage of their income would be subject to the VAT. This is primarily the reason for the undue emphasis upon a highly progressive personal income tax in this nation. The ability to pay approach has almost completely shoved aside the benefits received philosophy of taxation. The personal income tax is, in the opinion of this writer, so harshly progressive as to require some offset. Therefore, to this extent the VAT would represent an advantage instead of a disadvantage. The VAT would, perhaps, give some attention to the "benefits received" approach, and certainly this is a legitimate theory of taxation. However, as indicated above, Congress would likely "doctor" the VAT so as to avoid regressivity; after all, more votes would be harvested by vote buying politicians with these adjustments.

One of the theoretical advantages of a progressive income tax is that to a degree counter cyclical compensations are built in. For example, with inflation higher income taxes absorb a larger percentage of incomes, which has a dampening effect upon inflation and tends to smooth out the cycle. During recession, and theoretically with some degree of accompanying deflation, tax collections take a smaller portion of incomes, which also tends to correct deflation and encourage greater expenditures. One disadvantage of the VAT is that these counter cyclical advantages would be missing, since the tax rate is proportional. In fact, the tax might discourage spending during recessions.

Weak or new corporations, could suffer as the result of the addition of the VAT. Since only profitable firms (those with **net** incomes) pay the income tax, marginal or new firms would in many cases escape the income tax. Profitable and unprofitable firms alike pay the value added tax. Normally, of course, this tax is ultimately passed along to the consumer. However, profitable firms may to some extent absorb the tax, allowing them a competitive advantage over the weaker firms in the form of lower consumer prices.

As another disadvantage of the VAT Messrs. Glenn and Anderson quote one of the leading scholars in public finance, Dr. Richard Musgrove, on the VAT--"A business tax that business doesn't pay, a consumer tax that consumers don't see, and government services enjoyed by all without knowing who paid for them." So the tax is to a degree at least "hidden", and this defeats one possible advantage of the tax, that is, the possible stifling of demands for still greater government spending. This is based upon the notion that if those making these demands are clearly aware that they are paying taxes to support expenditures, the demands for increased government activities would be reduced.

Another disadvantage, results from the effects of price increases at a time when inflation has almost reached the catastrophic stage. To the extent that the 10% (for example) VAT is added to consumer prices the consumer price index would obviously increase commensurately. However, should the increase in prices dampen consumer spending, it is possible that the reduced demand could lower prices sufficiently to offset the tax. However, this effect is doubtful.

Lastly, the writers, Glenn and Anderson, lists as a disadvantage for the value added tax the "administrative headaches" for business firms in complying with the tax and the possibility that the VAT would work to the disadvantage of state and local governments which rely heavily on sales taxes. In effect, the federal government would be horning in on an area of taxation heretofore reserved to state and local governments. Opinions differ with respect to this possibility. W. Hafer and Michael E. Trebing in an article, "The Value-Added Tax—A Review of the Issues" (**Review**, Federal Reserve Bank, St. Louis, Jan. '80) point out that if the tax is not "hidden", and the VAT portion is clearly stated, consumers may resist additional "sales taxes," and make it difficult for state and local governments to use the sales tax to the extent that they now do.

In one of their summary statements, the Peat, Marwich, Mitchell and Company tax experts referred to above display real insight. "A Congress not known for its restrains on expansion and spending will be attracted to VAT because it is a revenue—generating tool potentially greater than the income tax. The political restraint on spending due to high income and social security tax rates will be lost." Their conclusion was: "In short, does America need VAT? Yes, but...."

In general, the Hafer and Trebing article (Federal Reserve Bank, St. Louis **Review**) and the Glenn and Anderson article (Peat, Marwich, Mitchell & Co., **World**) followed rather closely the same analytical points, and arrived at about the same answers. In summary, the Hafer and Trebing article states that. . . "a complete analysis of VAT must go deeper, examining the tax base, its neutrality, regressiveness, incidence (who **really** bears the burden of the tax), and effects on capital formation. In addition, the administrative costs of the tax itself must be considered as well."

As stated in a Dean's Corner several years ago, it would appear that those who have retired or will be retiring in a few years have paid extremely heavy income taxes. And, as indicated then, should the VAT be adopted to give relief to the income tax, these same people will now be heavily taxed on what little they have been able to squirrel away—as they spend it to meet living expenses—after government generated inflation has taken its massive bites. But, for those of us in this general age group, this will be about par for the course.

—Gaines M. Rogers, Dean

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(Continued from Page 8, column 2)

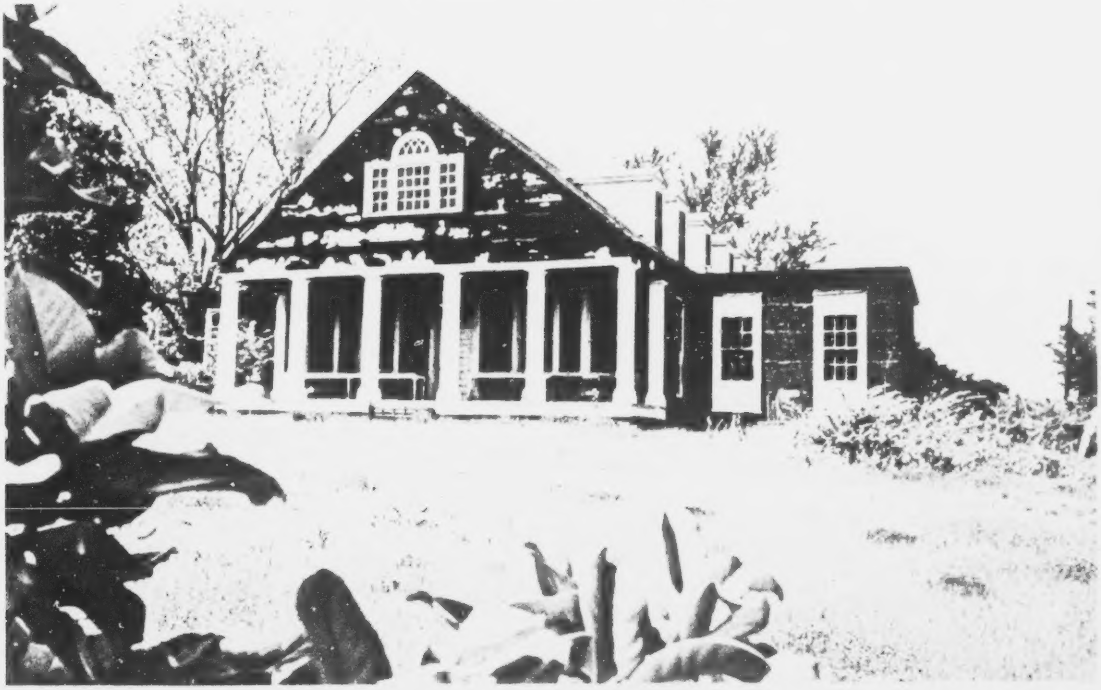
3. Allan D. DeSerpa, "A Theory of the Economics of Time," **Economic Journal**, Vol. 82 (December 1971), pp. 728-46 and Gary S. Becker, "A Theory of the Allocation of Time," **Economic Journal**, Vol. 76 (September 1965).
4. **Records, Computers, and the Rights of Citizens**, Report of the Secretary's Advisory Committee on Automated Personal Data Systems, Washington, D.C., July, 1973. Robert B. Norris, "**Consumer Record Keeping**," Consumer Credit 1975, Practicing Law Institute, New York, 1975, pp. 59-88; "Cautionary Notes on EFTS," **American Banker**;"Personal Data Use, Draft Ethics Code," **American Banker**, January 30, 1975, pp. 1, 14.
5. Donald E. Vinson, and Wayne McVandon, "Developing a Market for a New E.F.T.S. Bank Service," **Journal of Marketing**, Vol. 42 (April 1978), pp. 83-86.
6. **Report of the President's Commission on Financial Structure and Regulation** (Hunt Commission), Washington, D.C., December 1971.
7. Paul E. Giese, "How To Figure The Cost Of Getting Into EFT," **Banking**, November, 1975, p. 102.
8. National Commission on Electronic Fund Transfers, **EFT in the United States Policy Recommendations and the Public Interest**, p. 143.

Tourist Briefs

The Peyton House

"Waverly"

Raymond, Mississippi



The Peyton House was built near the town of Raymond during the years 1831-1834, by one of the early settlers of central Mississippi, John B. Peyton. Peyton was born, 1797, in Fauquier County, Virginia, and migrated to Mississippi in 1819, settling first in Natchez. After settling in Mississippi, his initial employment was that of a Federal surveyor and he is reputed to have been on the team supervised by Henry Washington, U.S. Deputy Surveyor, that surveyed the land acquired from the Choctaw Indians in the Treaty of Doak's Stand in 1820. Peyton worked as a surveyor for many years; and in 1825 settled in Hinds County near Edwards' Station. In 1827, he was elected major of the 18th regiment Mississippi Militia, but resigned the commission a year later after being elected to the Mississippi Legislature. In 1829, Peyton cast the deciding vote that kept the state capital from being moved to the town of Clinton and was challenged to a duel by Judge Isaac Caldwell of that community. Peyton, having the choice of weapons, selected rifles. No real damage resulted in the exchange of fire, but Caldwell was grazed by the ball from Peyton's rifle.

In 1831, Peyton purchased the land occupying the center of Hinds County and began building a fine home, which he named Waverly. Waverly was an adaptation of a certain 18th century Virginia style home to the Mississippi climate. It was noted for its elaborate woodwork, the odd shape of the gable end, and the unusual inclusion of a ground level room within the house.

The basic shape of the house is a simple one and one-half story, dormered house. This reflects the origins of John B. Peyton, who updated the shape by adding an unusually pedimented portico and by adapting the house to Mississippi's warm climate by using a floor plan that allowed for maximum ventilation. After Peyton built the house, he devoted most of his time to business interests, raising stock and building the town of Raymond. In 1838, Peyton was instrumental in the building of a railroad between Raymond and Bolton, intersecting the line running from Vicksburg to Jackson. The rails of this line were used after the Civil War to restore the line running from Vicksburg to Meridian, which had suffered badly during the Federal invasions of 1863-64.

After the Battle of Raymond, on May 12, 1863, the Peyton property became the scene of much Union activity. Major General Ulysses S. Grant used Waverly as temporary headquarters. It is recorded that Grant grabbed everything and went through and took all the livestock. The soldiers camped the next day in the area around the house.

"There was a long bench on each end of the porch, Grant sat on the west end in the mornings and the east end in the afternoons so he would be in the shade. My husband's great aunt asked for an interview with the General. They gave it to her and she said, 'You see these children?' and he said 'Yes.' She said, 'They're hungry and you've taken every morsel of food I had to feed them. What are you going to do about it?" He tucked his head and said, 'I'm going to give you some food back.' Having put the livestock in the Army Corral. Grant wrote an order allowing Mr. Peyton's servant to go into the corral and rescue his cattle. The order also said that no troops coming this way were to bother anything," Mrs. Erwin Peyton recalls.

The Erwin Peytons have a photostatic copy of Grant's order. In the summer of 1957, Erwin Peyton, great-grandson of John Peyton, began a complete renovation of the house. Since the restoration began, Mrs. Peyton has studied, traced, and uncovered vivid details of Waverly's past, a replica of the family home in Virginia.

John B. Peyton died June 6, 1868, at his home in Raymond, the only known extant structure associated with the life of this significant pioneer of Hinds County. Perhaps it was best said by Major Harper, editor of THE HINDS COUNTY GAZETTE in Mr. Peyton's Obituary.

> "Thus has passed away our oldest citizen—if not the oldest resident of the county. He was the last of the early stock. A landmark is removed. Farewell, old Friend!—May the grass grow green over your quiet resting place, and may your spirit abide with the Merciful God who gave it."

Source: Mississippi Department of Archives and History, and Roadways of Mississippi, May/June, 1977

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Amory **Amory Penthouse** Upholstered Furniture	200
Meridian **The Sweet Shop** Candies	2
Meridian **Cant Strip Corporation of America** Tapered Roof Fibreboard cant strip	3
Olive Branch **Midland Color Corporation** Corrugated Specialty Items	15
Olive Branch **Worcester Controls Corporation** Industrial Ball valves & control devices	50
EXPANDED	
Houston **Dixieland Mfg. Company** Upholstered Furniture	42
Houston **Franklin Mfg. Co.** Chairs	40
Houston **Vector Industries** Bonded Urethan carpet cushions	20

The Two Way Squeeze

A family of four must earn a pretax income just above $20,000 today to equal the purchasing power of $10,000 in 1970, The Conference Board reports in a recent Economic Road Map.

The main culprit in this erosion of purchasing power is inflation; the consumer price level has risen by more than 90% since 1970. However, increased Social Security taxes have taken their toll, and for higher-income families there has also been a substantial rise in the effective rate of income tax.

In 1970, a $10,000-a-year family had $8,640 to spend after Federal income and Social Security taxes. In 1980, the same family will need a gross income of $20,187 to match its 1970 after-tax spending power. Taxes siphon off $3,408 of this year's income, while an additional $8,139 is needed to cover the rise in prices over the last ten years.

Four-person families with incomes of $15,000 and $25,000 in 1970 require 1980 incomes equaling $30,722 and $52,495, respectively, to maintain the same purchasing power. The $5,000-a-year family in 1970 must earn $9,660 to stay equal.

As for the actual experience of U.S. families, The Conference Board estimates that median family income will be $21,350 this year, up from $9,867 in 1970. Despite this 116% rise in income, real purchasing power after taxes is only 7% greater than ten years ago.

The Federal income tax standard deduction was steadily liberalized in the 1970's, and there was a general rate cut in 1979. These changes have kept the income tax rate on average-income families relatively steady over the decade. For lower-income families, who also benefit from the "earned income credit" introduced in 1975, the Federal income tax percentage bite actually declined during the 1970's. At higher incomes, however, the effective Federal tax rate has risen appreciably. According to Lora Collins, director of Business Conditions Analysis at The Conference Board, "This reflects 'bracket creep,' where inflation-generated income growth moves taxpayers into higher tax brackets. This phenomenon mainly affects the top 25%-30% of the income distribution, although it is beginning to have some effect at lower income levels."

The increase in Social Security taxes, however, affects families at all income levels. The Social Security tax rate increased from 4.8% of the first $7,800 of earnings in 1970 to 6.13% of the first $25,000 this year, raising the maximum tax from $374 to $1,588.

Source: The Two-Way Squeeze, 1980
Economic Road Maps Nos. 1876-1877
The Conference Board
New York

INDEXES OF SELECTED MISSISSIPPI
ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	March 1980	February 1980	March 1979
Retail Sales	185.4	196.7	170.6
Electric Sales	211.4	206.7	208.4
Telephones in Service	223.5	221.7	213.6
Gasoline Gallonage	143.3	168.5	174.5
Loans of Savings & Loan Institutions	189.6	180.2	320.4

MEET THE FACULTY

Dr. Charles Morgan Butler

This month in the "Meet the Faculty" column, Dr. Charles Morgan Butler is featured. Dr. Butler is Professor of Business Statistics and Data Processing at Mississippi State University. He received his B.S. in Military Science from the United States Military Academy; his M.S. in Aeronautics and Astronautics from the Massachusetts Institute of Technology; his M.A. and Ph.D. in Mathematics from the University of Alabama. Prior to entering the academic community, Dr. Butler was an officer in the United States Air Force from 1953 through 1964.

Dr. Butler has taught a wide range of courses which include Navigation (while in the Air Force), Industrial Engineering, Statistics, Operations Research, Data Processing, and Mathematics. He has taught at Charleston Air Force Base, South Carolina, and the University of Alabama.

Having published/presented approximately fifteen research papers, his most recent one proposes a "Profile of Energy Consumption in Mississippi," and he is currently working on the "Recent Applications of the Lognormal Distribution." Dr. Butler is also a consultant to Mitchell Engineering Company in Columbus.

He has been active in professional and civic organizations and is currently the Mississippi Representative to the Mathematical Association of America and chairman of the Education Committee for the Starkville Exchange Club.

Dr. Butler has received a number of professional honors which include Pi Mu Epsilon, Personalities of the South, Who's Who in the South and Southwest, Who's Who in Computer Education and Research, and American Men and Women of Science.

Dr. Butler is married to the former Laura Jewel De Bardeleben of Selma, Alabama, and has three daughters; Louise will be a junior and Kathy will be a freshman this fall, both at Mississippi State; Jeanne will be a freshman at Starkville High.

STATE ECONOMIC INDICATORS

Indicator	March 1980[10]	February 1980[11]	March 1979[11]	Per Cent Change One Month Ago[12]	Per Cent Change One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	1,005,100	988,500	973,200	1.7	3.3
Non-Ag Employment	836,900	835,300	827,300	0.2	1.2
Mining	9,800	9,800	9,000	0.0	8.9
Contract Construction	43,400	42,500	44,300	2.2	− 2.0
Manufacturing	227,900	228,200	232,800	− 0.1	− 2.1
Transportation and Public Utilities	41,600	41,500	40,000	0.2	4.0
Wholesale and Retail Trade	162,300	162,200	159,600	0.1	1.7
Finance, Insurance and Real Estate	33,100	33,100	32,100	0.0	3.1
Service	120,100	119,700	116,000	0.3	3.5
Government	198,500	198,200	193,600	0.2	2.5
Unemployment Rate (Per Cent Labor Force)	6.4	7.0	6.0	——	——
Average Weekly Earnings in Manufacturing	212.12	209.61	194.80	1.2	8.9
Average Hourly Earnings in Manufacturing	5.37	5.32	4.87	0.9	10.3
Average Weekly Hours in Manufacturing	39.5	39.4	40.0	0.3	1.3
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,151	3,234	3,228	− 2.6	− 2.4
Gasoline delivered to Dealers (gals.)[3]	100,703	125,083	119,438	−19.5	−15.7
Dairy Production					
Milk (lbs.)[4]	74,000	65,000	74,000	13.9	0.0
Egg Production[4]	139,000	127,000	147,000	9.5	− 5.4
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	24,700	19,400	35,500	27.3	−30.4
Construction Loans	2,100	2,400	4,600	−12.5	−54.4
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,683,232	1,788,222	1,609,647	− 5.9	4.6
Telephones in Service[7]	1,482,519	1,475,050	1,417,032	0.5	4.6
RETAIL SALES TAX COLLECTIONS[8]	1,090,240	1,089,896	947,680	0.03	15.0
AGRICULTURE (ooo's)[9]					
Total Cash Receipts from Farm Marketings					
Cash Receipts from Marketing Livestock					
Cash Receipts from Marketing Crops					

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for January

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S. Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago
Aberdeen	7.4	—11.0	8,136	0.8	5.4	35,422	4.9	16.4	127,900	38,600	15,500
Baldwyn	10.3	— 2.5	4,661	0.7	6.3	16,240	— 6.0	—10.7	— —	— —	— —
Batesville	— —	— —	8,637	0.5	6.2	46,081	14.9	61.4	65,000	143,900	52,700
Bay Springs	— —	— —	— —	— —	— —	19,154	—13.6	14.5	— —	— —	— —
Bay St. Louis	— —	— —	13,237	0.5	8.4	28,260	13.1	7.4	151,410	121,200	220,092
Belmont	8.1	7.4	2,233	0.4	4.7	7,698	12.5	— 1.8	— —	— —	— —
Belzoni	— —	— —	4,852	0.6	6.7	22,855	10.1	26.5	13,000	21,600	145,653
Biloxi	— —	— —	44,971	—0.1	1.8	214,068	3.9	38.7	602,235	1,402,409	2,957,967
Brandon	18.2	7.3	11,491	0.4	0.9	22,602	— 5.8	— 1.9	677,500	404,000	583,200
Brookhaven	— .4	10.3	15,884	0.0	2.2	93,157	— 2.9	16.2	— —	— —	— —
Brooksville	— —	— —	1,331	0.9	5.6	2,638	—13.1	7.0	— —	— —	— —
Canton	— —	— —	10,653	0.4	4.7	58,496	12.4	21.1	22,767	118,700	62,688
Carthage	1.5	—10.5	7,401	—0.2	6.4	29,992	2.6	44.6	35,000	200,000	160,000
Charleston	5.7	1.9	4,091	0.6	3.4	15,866	13.5	31.6	— —	— —	— —
Clarksdale	—25.2	—24.1	20,866	0.8	5.1	99,286	10.2	17.8	210,800	277,939	93,145
Cleveland	— —	— —	14,144	0.7	3.6	77,728	0.4	18.6	— —	— —	— —
Collins	6.9	10.2	4,615	0.3	4.3	35,958	—15.1	46.5	— —	— —	85,000
Columbia	— —	— —	15,559	0.5	4.5	60,998	2.9	25.3	— —	— —	— —
Columbus	4.1	15.0	33,669	0.3	3.7	180,209	8.9	23.9	243,855	360,810	313,749
Corinth	3.0	14.7	20,620	0.6	5.0	86,873	7.9	6.2	1,127,704	422,210	185,936
Crystal Springs	— —	— —	5,866	0.5	6.2	20,088	—19.5	5.9	84,000	40,000	88,000
Drew	— —	— —	2,713	1.0	5.0	10,166	— 3.3	12.8	2,500	9,000	2,500
Edwards	10.5	— —	1,630	—0.1	6.1	3,362	— 5.9	12.9	— —	— —	— —
Ellisville	4.9	67.2	3,875	0.9	7.1	12,516	8.5	26.9	— —	— —	— —
Eupora	— —	— 4.0	4,399	0.0	6.4	14,083	3.4	12.3	— —	— —	— —
Fayette	19.3	28.0	3,295	0.6	6.3	7,770	— 4.0	10.4	35,000	25,000	25,000
Forest	— —	10.5	5,074	0.4	5.5	44,953	— 2.0	13.1	— —	— —	— —
Greenville	— 0.4	9.3	36,838	0.9	4.5	201,332	— 2.5	8.5	— —	— —	— —
Greenwood	— —	— —	23,875	0.9	3.2	123,493	3.9	14.7	967,500	24,540	414,948
Grenada	— —	— —	14,153	0.7	4.8	68,211	2.1	9.5	— —	— —	— —
Gulfport	6.6	5.5	60,849	0.6	5.0	215,832	2.9	17.0	4,646,521	502,503	673,103
Hattiesburg	— —	— —	59,336	0.5	5.7	273,909	— 2.6	— 3.0	1,455,894	1,348,367	922,687
Hernando	— —	— —	7,049	1.0	5.9	18,640	7.2	13.7	32,000	18,000	156,825
Hollandale	— —	— 0.2	3,372	1.2	5.8	11,018	13.9	12.0	— —	— —	— —
Holly Springs	— —	— —	7,298	0.3	4.5	28,600	— 9.5	5.2	— —	— —	— —
Houston	— —	— —	5,561	0.3	3.7	21,520	10.2	10.6	400	59,800	34,000
Indianola	24.7	14.9	7,803	0.8	5.3	57,071	28.8	30.9	— —	— —	— —
Iuka	— —	— —	5,476	1.6	10.9	22,149	— 4.1	26.7	— —	— —	— —
Jackson	— 3.2	9.1	224,425	0.3	3.8	1,228,956	— 1.3	4.7	8,749,533	4,292,540	7,854,661
Kosciusko	— 3.4	— 5.7	9,534	0.8	3.6	41,814	— 3.8	15.8	105,200	198,390	658,350
Laurel	— —	16.7	34,149	0.8	5.0	198,057	— 7.3	7.2	500,169	642,695	7,317,677
Leland	— —	— —	5,063	1.1	15.4	15,296	— 3.4	—17.4	283,150	66,000	38,600
Lexington	— —	— —	4,784	0.5	4.8	16,440	— 4.9	4.9	— —	— —	— —
Louisville	12.0	— 1.3	10,595	0.7	4.0	43,245	19.8	19.3	34,977	388,500	141,300
Lucedale	— —	— —	8,222	0.7	7.0	27,897	— 6.6	14.1	58,000	65,000	68,000
Lumberton	— —	— —	2,911	1.1	3.7	6,697	9.8	— 6.9	— —	— —	— —
Macon	— —	— —	3,719	0.8	1.4	13,429	4.7	14.0	— —	— —	— —
Magee	— —	— —	5,284	0.3	5.9	34,249	8.4	37.5	— —	— —	— —
Magnolia	5.6	1.4	4,166	0.5	4.8	9,321	—28.2	22.3	87,680	500,246	15,700
Marks	3.9	51.0	5,505	0.9	5.1	13,952	— 4.8	13.8	— —	— —	— —
McComb	— —	— —	19,739	0.8	5.4	96,307	3.5	8.8	573,371	206,100	318,500
Meadville	13.1	2.5	— —	— —	— —	5,239	28.0	16.6	— —	— —	— —
Mendenhall	115.6	1.1	6,530	0.5	5.8	19,231	22.9	5.9	47,946	45,000	76,100
Meridian	— —	— —	48,014	0.5	4.3	292,945	0.3	12.4	642,905	615,426	1,035,759
Monticello	—19.3	— 0.9	4,784	0.2	7.4	15,070	— 5.6	3.7	35,000	13,500	— —
Morton	— —	— —	3,453	0.6	3.2	18,073	13.1	39.6	— —	— —	— —
Moss Point	9.9	— 1.7	16,717	0.2	2.7	33,589	—11.0	— 6.6	333,600	218,100	84,133
Natchez	— 6.4	16.5	29,411	0.5	5.7	200,218	22.5	45.4	298,959	81,030	414,076
New Albany	— —	— —	11,129	0.6	4.9	42,097	9.0	11.9	118,552	46,800	115,176
Newton	— 2.1	1.1	4,052	0.2	3.5	18,494	— 0.2	16.9	31,800	32,200	35,600
Ocean Springs	11.5	7.0	15,751	0.3	3.9	55,993	15.5	9.8	529,754	301,683	226,460
Okolona	— 7.1	— 8.2	3,402	0.5	4.0	12,484	2.0	3.2	— —	— —	— —
Oxford	— —	— 4.4	21,489	0.4	3.8	70,618	0.1	14.6	40,000	45,000	492,832
Pascagoula	— —	19.8	34,687	0.9	1.7	186,150	—11.3	20.3	358,220	355,017	343,320
Pass Christian	— —	— —	5,487	0.2	3.1	8,067	—14.1	—20.1	17,300	91,150	34,550
Philadelphia	8.9	11.0	11,439	0.3	6.1	43,574	17.5	24.3	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago	Current Month March	Month Ago	Year Ago
Picayune	——	——	15,101	0.6	6.1	51,475	−22.3	− 8.6	77,000	224,500	391,415
Pontotoc	13.7	3.3	9,257	0.4	3.7	31,574	10.8	15.0	——	——	——
Poplarville	——	——	4,078	0.3	1.5	10,311	17.2	−20.3	8,000	——	33,000
Port Gibson	−12.8	− 4.4	5,702	0.1	7.8	12,560	− 2.4	8.8	——	——	——
Prentiss	——	——	4,406	0.4	5.1	16,972	− 1.9	17.4	8,000	93,000	30,000
Quitman	14.4	17.7	4,859	0.3	5.3	21,936	1.5	24.0	——	——	——
Raymond	− 2.4	21.8	3,193	0.3	9.2	8,403	− 7.7	1.6	——	——	——
Richton	——	——	1,962	0.6	4.9	10,213	17.8	31.8	20,000	——	——
Rosedale	9.3	——	1,616	−0.6	2.0	5,690	− 5.9	3.0	4,000	——	2,000
Ruleville	−47.9	8.3	1,998	0.0	1.7	10,479	38.4	56.5	5,600	780	41,828
Sardis	——	——	3,515	1.2	4.0	13,479	1.0	17.2	10,000	28,000	114,000
Senatobia	− 4.3	——	6,743	0.3	6.9	37,119	18.2	27.4	546,000	5,000	23,000
Shelby	21.5	21.7	1,682	0.3	0.2	8,574	6.6	10.0	——	——	——
Starkville	——	——	24,955	0.4	4.8	73,181	− 5.6	13.8	1,164,000	313,000	916,000
Summit	——	——	1,627	1.4	5.0	7,241	− 8.0	14.9	——	——	——
Taylorsville	3.9	5.3	1,768	0.2	4.1	10,605	− 2.4	9.8	——	——	——
Tchula	——	——	2,010	0.3	2.0	3,177	−18.6	−12.3	——	——	——
Tunica	——	——	4,309	1.2	6.0	13,964	3.8	3.2	——	——	——
Tupelo	7.3	17.9	37,299	0.3	4.8	246,916	12.6	17.9	355,375	397,599	927,197
Union	3.6	6.2	2,739	0.1	4.6	13,166	16.5	4.2	——	——	——
Utica	11.1	−43.4	3,001	0.6	5.0	7,119	1.5	18.2	——	——	——
Vicksburg	10.2	10.9	36,575	−4.4	− 1.1	168,371	12.5	19.8	409,610	286,450	131,428
Walnut Grove	——	——	1,010	0.4	4.1	1,206	− 7.4	15.4	——	——	——
Water Valley	——	——	4,016	0.5	5.6	16,596	6.6	9.4	——	——	——
Waynesboro	−37.3	19.4	7,479	0.4	7.8	48,540	−17.6	16.4	170,000	400,000	128,000
West Point	0.9	− 6.1	12,215	0.6	5.9	40,759	2.9	18.3	346,740	439,000	166,950
Wiggins	4.3	21.9	6,188	−0.2	5.9	20,458	8.8	67.2	——	80,000	500
Winona	5.6	6.5	4,995	0.1	3.4	24,208	− 6.2	14.1	9,400	2,900	66,750
Yazoo City	18.3	0.2	12,231	0.7	4.9	54,294	2.5	32.1	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	March 1980[1]	February 1980	March 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	149,400	147,700	141,900	1.2	5.3
Unemployed Persons	5,800	6,200	5,300	−6.5	9.4
Per Cent of Labor Force	3.9	4.2	3.7	——	——
Employed Persons	143,600	141,500	136,600	1.5	5.1
Non-Ag Wage & Salaried	124,500	123,200	118,100	1.1	5.4
Manufacturing	17,300	17,000	16,800	1.8	3.0
TELEPHONES IN SERVICE	243,740	242,955	234,919	0.3	3.8
CITY SALES TAX COLLECTIONS	1,270,442	1,288,985	1,213,994	−1.4	4.7

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	March 1980[1]	February 1980	March 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	62,900	61,800	61,040	1.8	3.1
Unemployed Persons	3,750	3,870	3,530	−3.1	6.2
Per Cent of Labor Force	6.0	6.3	5.8	——	——
Employed Persons	59,150	57,930	57,510	2.1	2.9
Non-Ag Wage & Salaried	50,550	49,650	48,980	1.8	3.2
Manufacturing	8,130	7,950	8,050	2.3	1.0
TELEPHONES IN SERVICE	111,307	110,983	107,464	0.3	3.6
CITY SALES TAX COLLECTIONS	437,967	425,005	348,981	3.1	25.5

[1] Preliminary

Annual Wages of Workers Covered by Mississippi Employment Security Law

Source: Mississippi Employment Security Commission. Computations made by Division of Business Research, College of Business and Industry, Mississippi State University.

County	1977	% of State	% of Change	1978	% of State	% of Change
Adams	123,205	2.34	9.37	156,133	2.21	26.73
Alcorn	90,923	1.73	20.22	122,192	1.73	34.39
Amite	11,906	.23	— 1.60	15,148	.21	27.23
Attala	35,369	.67	24.78	39,089	.55	10.52
Benton	3,269	.06	— 0.97	5,552	0.08	69.84
Bolivar	67,861	1.29	12.62	98,634	1.39	45.35
Calhoun	20,637	.39	9.39	27,744	.39	34.44
Carroll	3,152	.06	9.71	5,602	.08	77.73
Chickasaw	39,952	.79	10.00	51,948	.73	30.03
Choctaw	8,442	.16	11.08	13,058	.18	54.68
Claiborne	66,676	1.27	13.50	84,951	1.20	27.41
Clarke	29,244	.56	15.43	37,441	.53	28.03
Clay	58,678	1.11	12.60	67,464	.95	14.97
Coahoma	50,976	.97	10.37	82,685	1.17	62.20
Copiah	29,387	.56	8.31	44,055	.62	49.91
Covington	17,903	.34	8.10	24,817	.35	38.62
DeSoto	67,235	1.28	17.17	91,164	1.29	35.59
Forrest	185,994	3.53	11.18	237,225	3.35	27.54
Franklin	5,715	.11	18.57	9,436	.13	65.11
George	10,141	.19	9.76	15,788	.22	55.68
Greene	4,359	.08	18.68	8,552	.12	96.19
Grenada	58,908	1.12	11.85	74,838	1.06	27.04
Hancock	34,565	.66	29.84	48,501	.69	40.32
Harrison	248,098	4.71	14.15	335,931	4.75	35.40
Hinds	895,967	17.01	11.55	1,183,152	16.71	32.05
Holmes	14,483	.28	12.86	28,558	.40	97.18
Humphreys	10,954	.21	11.15	18,231	.26	66.43
Issaquena	905	.02	37.54	1,616	.02	78.56
Itawamba	25,346	.48	7.79	35,541	.50	40.22
Jackson	508,268	9.65	7.29	571,516	8.07	12.44
Jasper	19,184	.36	12.66	25,255	.36	31.65
Jefferson	5,251	.10	21.52	9,840	.14	87.39
Jeff Davis	9,069	.17	9.12	14,163	.20	56.17
Jones	145,503	2.76	15.31	196,531	2.78	35.07
Kemper	5,332	.10	24.75	9,543	.13	78.98
Lafayette	58,246	1.11	14.17	76,030	1.07	30.53
Lamar	21,534	.41	30.65	28,400	.40	31.88
Lauderdale	186,408	3.54	12.90	238,628	3.37	28.01
Lawrence	21,926	.42	12.90	27,309	.39	24.55
Leake	16,194	.31	11.79	24,690	.35	52.46
Lee	225,853	4.29	12.46	268,488	3.79	18.88
LeFlore	73,153	1.39	5.71	109,199	1.54	49.27
Lincoln	[illegible]7,633	[illegible]	21.[illegible]	68,[illegible]6	.96	43.13

County	1977	% of State	% of Change	1978	% of State	% of Change
Lowndes	146,347	2.78	18.08	180,654	2.55	23.44
Madison	44,850	.85	23.87	63,873	.90	42.41
Marion	37,972	.72	12.74	52,718	.74	38.83
Marshall	23,709	.45	3.67	36,990	.52	56.02
Monroe	70,847	1.35	11.96	89,888	1.27	26.88
Montgomery	14,670	.28	5.06	19,881	.28	35.52
Neshoba	39,763	.76	8.54	51,456	.73	29.41
Newton	28,345	.54	8.99	37,937	.54	33.84
Noxubee	10,804	.21	17.04	16,983	.24	57.19
Oktibbeha	68,518	1.30	10.70	90,139	1.27	31.56
Panola	37,619	.71	3.11	53,470	.76	42.14
Pearl River	29,082	.55	9.22	44,324	.63	52.41
Percy	9,994	.19	45.81	14,767	.21	47.76
Pike	56,717	1.08	7.35	81,207	1.15	43.18
Pontotoc	31,360	.60	20.56	42,427	.60	35.29
Prentiss	31,484	.60	5.09	45,820	65	45.53
Quitman	10,257	.19	13.35	16,860	.24	64.38
Rankin	112,123	2.13	19.71	158,307	2.24	41.19
Scott	37,379	.71	13.25	54,172	77	44.93
Sharkey	7,652	.15	18.95	15,309	.22	100.07
Simpson	33,617	.64	18.90	44,255	.63	31.64
Smith	23,347	.44	12.30	28,988	.41	24.16
Stone	17,058	.32	29.70	29,757	.42	74.45
Sunflower	38,697	.73	10.46	68,919	.97	78.10
Tallahatchie	8,500	.16	10.28	18,289	.26	115.16
Tate	23,772	.45	11.05	33,186	.47	39.60
Tippah	26,415	.50	12.18	36,160	.51	36.89
Tishomingo	28,887	.55	16.71	39,378	.56	36.32
Tunica	7,054	.13	3.19	13,570	.19	92.37
Union	38,649	.73	— 1.17	52,009	.73	34.57
Walthall	11,321	.21	5.46	16,322	.23	44.17
Warren	108,975	2.07	6.84	151,539	2.14	39.06
Washington	156,214	2.96	9.28	209,006	2.95	33.79
Wayne	22,841	.43	14.69	32,662	.46	43.00
Webster	12,616	.24	3.41	18,780	.27	48.86
Wilkinson	10,604	.20	35.08	15,603	.22	47.14
Winston	32,774	.64	8.74	43,952	.62	34.11
Yalobusha	16,737	.32	12.08	24,167	.34	44.39
Yazoo	40,902	.78	6.66	52,789	75	29.06
Other	193,546	3.68	36.13	349,481	4.94	80.57
State Total	5,26[illegible],823			[illegible]7,078,88[illegible]		

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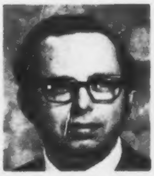

Hoyet Wilson is an associate professor in business administration at Laredo State University. He holds a Ph.D. in finance from North Texas State University, is a Certified Public Accountant (Texas and Oregon), and holds the Certificate in Management Accounting. He has five years teaching experience and has published numerous articles.

Dr. Lacho holds a B.S. in Chemical Engineering, MBA and DBA, all from Washington University, St. Louis. Currently he is Professor of Marketing and Associate Director of the Division of Business and Economic Research at the University of New Orleans.

Dr. Lapp is now Visiting Professor of Management and Marketing at the University of Dallas and Professor Emeritus of Marketing from Washington University's Graduate School of Business and Public Administration in St. Louis, Missouri. He holds a BA degree from Southwest Missouri State University, a MBA from Northwestern University, and a Ph.D. degree from Ohio State University.

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Corporate Financial Reporting Practices and Techniques in the Paper and Forestry Products Industry - 1978

by

Hoyet W. Wilson

Purpose of the Paper

The purpose of this paper is to examine corporate financial reporting practices and techniques in the paper and forest products industry in 1978. The auditing firms and audit opinions for 1978 are surveyed. Corporate financial statement terminology is then analyzed. Management's letter to the shareholders and the composition of corporate boards of directors and committees are examined. The use of preferred stock and the existence of treasury stock in capitalization structures are surveyed. As a result, the reader may gain insight into corporate financial reporting practices and techniques in the paper and forest products industry.

The Major Firms in the Paper and Forest Products Industry

The twenty-five largest firms in the paper and forest products industry in terms of 1978 sales are shown in Table I. As may be seen from the table, the firms range in size from Georgia-Pacific with sales of $4,403 million to Chesapeake Corporation of Virginia with sales of $175 million. Louisiana-Pacific (sales of $1,042 million) is a spin-off of Georgia-Pacific; were the two firms combined, Georgia-Pacific would be the industry leader by an even greater margin. Among the five largest firms, three are headquartered in the Pacific Northwest and two are headquartered in the Northeast. (Georgia-Pacific is moving its headquarters to Atlanta.) Total sales of the twenty-five largest firms in the industry in 1978 were $39,431 million.

TABLE I.

THE TWENTY-FIVE LARGEST FIRMS IN THE PAPER AND FOREST PRODUCTS INDUSTRY RANKED IN TERMS OF SALES
—1978—

Firm	Sales (millions)
1. Georgia-Pacific (Portland, OR)	$4,403.0
2. International Paper (New York)	4,165.8
3. Weyerhauser (Tacoma, WA)	3,799.4
4. Champion International (Stamford, CT)	3,475.1
5. Boise Cascade (Boise, ID)	2,573.1
6. Crown Zellerbach (San Francisco)	2,456.0
7. St. Regis Paper (New York)	2,336.5
8. Mead (Dayton, OH)	2,322.1
9. Kimberly-Clark (Nennah, WI)	1,910.6
10. Scott Paper (Philadelphia)	1,724.9
11. Union Camp (Wayne, NJ)	1,192.1
12. Westvaco (New York)	1,139.2
13. Diamond International (New York)	1,108.5
14. Louisiana-Pacific (Portland, OR)	1,042.1
15. Great Northern Nekoosa (Stamford, CT)	960.7
16. Hammermill Paper (Erie, PA)	912.3
17. Potlatch (San Francisco)	787.0
18. Willamette Industries (Portland, OR)	772.3
19. Southwest Forest Industries (Phoenix, AZ)	591.0
20. Brown (Pasadena, CA)	383.8
21. Federal Paper Board (Montvale, NJ)	375.6
22. Bemis (Minneapolis, MN)	319.7
23. Fort Howard Paper (Green Bay, WI)	296.4
24. Pacific Lumber (San Francisco)	208.0
25. Chesapeake Corporation of Virginia (West Point, VA)	175.3

Auditing Firms and Audit Opinions

Each of the "Big Eight" auditing firms had at least one client in the paper and forest products industry. The auditing firms and number of industry clients for each firm in 1978 were as follows:

Arthur Andersen	8 firms
Price Waterhouse	6 firms
Deloitte, Haskins & Sells	4 firms
Coopers and Lybrand	2 firms
Peat, Marwick, Mitchell	2 firms
Arthur Young	1 firm
Ernst & Ernst	1 firm
Touche Ross	1 firm

Arthur Andersen was the dominant auditing firm in number and importance of clients. Arthur Andersen audited the five largest firms in the industry and the eight firms audited by Arthur Andersen accounted for fifty-three percent of sales of the twenty-five largest firms in the paper and forest products industry. Price Waterhouse was the second most significant industry auditor, auditing six firms with sales accounting for fifteen percent of total sales of the twenty-five largest firms. Deloitte, Haskins & Sells was the third most significant industry auditor, auditing four firms with sales accounting for twelve percent of total sales of the twenty-five largest firms.

Four audit opinions were qualified in 1978 because of antitrust litigation. The audit opinions of Georgia-Pacific (audited by Arthur Andersen), Weyerhauser (audited by Arthur Andersen), Louisiana-Pacific (audited by Arthur Andersen), and Willamette Industries (audited by Peat, Marwick, Mitchell) were qualified. In three instances the opinion qualification on the 1977 financial statements was removed by Deloitte, Haskins & Sells: St. Regis Paper, Federal Paper Board, and Diamond International. In two audit opinions reference was made to another auditor: International Paper and Kimberly-Clark.

The audit opinion may be addressed to the board of directors, to the shareholders, to the corporation, or to some combination of the above. Eighteen audit opinions were addressed to the shareholders **and** the board of directors. The audit opinions at three firms (International Paper, Weyerhauser, and Boise Cascade) were addressed to the shareholders only. The audit opinions at three firms (Mead, Potlatch, and Brown) were addressed to the board of directors only. And one audit opinion (Kimberly-Clark) was addressed to the corporation, to the board of directors, and to the shareholders. Thus, the general practice in the paper and forest products industry is to address the audit opinion to the shareholders **and** the board of directors.

Corporate Financial Terminology

Income Statement

The **title** of the income statement used in 1978 financial statements was as follows:

"Statement of Income"	13 firms
"Statement of Earnings"	7 firms
"Income"	3 firms
"Earnings"	2 firms

Five firms omitted any mention of consolidated in the income statement title. Thus, "Statement of Income" is the most frequently used title of the statement in the paper and forest products industry.

The **bottom line** of the income statement was identified as "Net Income" in sixteen annual reports and "Net Earnings" in eight annual reports. (Federal Paper Board suffered a loss and correspondingly identified the bottom line as "Net Loss".) Thus, "Net Income" is the most frequently used title for the bottom line in the paper and forest products industry.

Balance Sheet

The **title** of the balance sheet used in 1978 financial statements was "Balance Sheet" for twenty-four firms. Five firms omitted any mention of consolidated in the balance sheet. Thus, "Balance Sheet" is the most frequently used title of the statement in the paper and forest products industry.

The **shareholders' equity section** of the balance sheet was identified in the twenty-five annual reports in 1978 as follows:

"Shareholders' Equity"	10 firms
"Stockholders' Equity"	8 firms
"Stockholders' Investment"	2 firms
"Shareowners' Equity"	2 firms
"Shareholders' Ownership"	1 firm
"Capital Stock and Surplus"	1 firm
"Shareholders' Interest"	1 firm

Thus, "Shareholders' Equity" is the most frequently used title to the equity component of the balance sheet in the paper and forest products industry.

The **paid-in-capital caption** of the balance sheet was identified in the twenty-five annual reports in 1978 as follows:

"Additional Paid-In Capital"	7 firms
"Capital in Excess of Par"	5 firms
No Title	5 firms
"Other Capital"	3 firms
"Capital Surplus"	3 firms
"Paid-In Surplus"	2 firms

Thus, "Additional Paid-In Capital" is the most frequently used title of the caption in the paper and forest products industry.

The **retained earnings caption** of the balance sheet was identified in the twenty-five annual reports in 1978 as follows:

"Retained Earnings"	17 firms
"Earned Surplus"	2 firms
"Income Retained in the Business"	2 firms
"Retained Income"	2 firms
"Reinvested Earnings"	1 firm
"Earnings Retained"	1 firm

Thus, "Retained Earnings" is the most frequently used title of the caption in the paper and forest products industry. A summary of the most frequently used titles and captions for all industry financial statements is presented in the summary.

Statement of Changes in the Financial Position

The title of the statement of changes in financial position used in 1978 financial statements was as follows:

"Statement of Changes in Financial Position"	20 firms
"Changes in Financial Position"	5 firms

Five firms omitted any mention of consolidated in the title of the statement of changes in financial position. Thus, "Statement of Changes in Financial Position" is the most frequently used title of the financial statement in the paper and forest products industry.

Management's Letter to the Shareholders and the Composition of the Board of Directors

Management's letter to the shareholders was signed by one person, two persons, or three persons in the 1978 annual reports as follows:

One signature	
President and Chief Executive Officer	7 firms
Chairman and Chief Executive Officer	4 firms
Chairman and President	3 firms
President	1 firm
Chairman	1 firm
Two signatures	
Chairman, and Chief Executive Officer; President	3 firms
Chairman and Chief Executive Officer; President and Chief Operating Officer	3 firms
Chairman; President and Chief Executive Officer	1 firm
President; Chairman	1 firm
Three signatures	
Chairman; Vice Chairman; President	1 firm

Thus, there is a wide variety of responsibility as evidenced by the signatures on management letters in annual reports in the paper and forest products industry.

The typical board of directors consists of thirteen members, five of which are inside directors (i.e., employed by the corporation at one time or another) and eight of which are outside directors (i.e., not directly employed by the corporation). The largest board of directors was that of International Paper, a total of seventeen directors of which eight were inside and nine were outside. The smallest board of directors was that of Louisiana-Pacific, a total of eight directors of which three were inside and five were outside. The most frequently mentioned committees to the board of directors in 1978 annual reports were as follows:

Audit Committee	20 firms
Executive Committee	17 firms
Compensation Committee	13 firms
Finance Committee	5 firms
Nominating Committee	3 firms
Ethics Committee	3 firms

The three firms indicating a nominating committee were Boise Cascade, Crown Zellerbach, and Scott Paper.

Preferred Stock and Treasury Stock

Most companies in the industry utilize preferred stock in their capitalization structures. Sixteen firms indicated authorization or issuance of at least one class of preferred stock. The preferred stock of Diamond International and Federal Paper Board is convertible into common stock. The preferred stock of Boise Cascade is voting. Thus, the majority of companies in the paper and forest products industry utilize preferred stock in their capitalization structures.

Treasury stock is in evidence in seventeen of the twenty-five firms surveyed. Treasury stock is significant in relation to total stockholders' equity in three companies: Pacific Lumber, 8.3 percent; Champion International, 6.8 percent; and Federal Paper Board, 4.2 percent. Thus, common stock repurchase is a frequent practice in the paper and forest products industry.

Summary and Conclusions

The dominant auditing firm in the paper and forest products industry is Arthur Andersen, followed by Price Waterhouse, and Deloitte, Haskins & Sells. Four audit opinions in 1978 were qualified. The general practice in the industry is to address the audit opinion to the shareowners and the board of directors.

The composite corporate financial statement terminology for the paper and forest products industry is presented in Table II.

Management letters to the shareholders are signed by one corporate officer, two corporate officers, or three corporate officers. The typical board of directors in the industry consists of thirteen members, five inside directors and eight outside directors. The two most frequently mentioned committees to the board of directors in 1978 annual reports are the audit committee and the executive committee.

TABLE II.
A COMPOSITE CORPORATE FINANCIAL STATEMENT IN THE PAPER AND FOREST PRODUCTS INDUSTRY, 1978

Income Statement	
Title -	"Statement of Income"
Bottom Line	"Net Income"
Balance Sheet	
Title -	"Balance Sheet"
Shareholders' Equity Section -	"Shareholders' Equity"
Paid-In Capital Section -	"Additional Paid-In Capital"
Retained Earnings Section -	"Retained Earnings"
Statement of Changes in Financial Position	
Title -	"Statement of Changes in Financial Position"

Source: Annual reports, 1978

Sixteen of the twenty-five surveyed companies in the paper and forest products industry utilize preferred stock in their capitalization structures. Treasury stock is found in seventeen of the twenty-five capitalization structures.

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	April 1980	March 1980	April 1979
Retail Sales	192.6	185.4	158.5
Electric Sales	206.7	211.4	204.9
Telephones in Service	224.3	223.5	214.4
Gasoline Gallonage	139.4	143.3	167.3
Loans of Savings & Loan Institutions	155.6	189.6	215.4

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Mantachie **Mantachie Furniture Mfg. Co.** Upholstered Furniture	20
EXPANDED	
Starkville **MFJ Enterprises** Radio Accessories	25
Tupelo **Mid-South Packers** Meat Processing	200

New Telephone Numbers!

As of June 20, 1980 the Division of Business Research will have a new telephone number. The new number is 325-3817.

Mississippi State University is installing a new telephone system in order to facilitate long-distance billing for campus-student billing. By June 21, all campus administrative or office telephone numbers will be changed. Prior to opening of the fall semester, the dormitories and other campus student housing will be changed. The three-digit prefix for all campus numbers will remain 325. Dormitory numbers will be 4000 through 7999. Business numbers will be 2000 through 3999.

The new campus information number is 325-2323. Until the new South Central Bell Telephone directories are issued next fall, off-campus callers will have to utilize Information for new campus numbers.

The Critical Role of an Executive Secretary

By

Dr. Charles Lapp
and
Dr. Kenneth J. Lacho

A secretary too often is one of the least appreciated but yet the most critical person to an executive's success or failure. Because of her or his importance there is a trend to give him or her a more important title such as administrative assistant. If she does an efficient job it may often be taken as a matter of course. If she "goofs up" the reminders of her mistakes can easily have her in tears even though she may have been helpless to have done otherwise.

Typically there is no other person in an organization that occupies such a unique role as a secretary. What makes her role so different? She takes orders yes, she is delegated authority and given responsibilities as many other employees. But in contrast, she also is a person who often **works with** rather than for her boss. Then, too, she often has to tactfully make suggestions and communicate to others who are superior to her in rank. Deftly she may have to boss her boss as well as a number of other people. Thus no person occupies such a unique role in an organization unless it is a product manager.

Now just why is a secretary so important and just what can she do to assist her boss to be a greater success than he might be without her? It is generally agreed an inefficient or incompatible secretary can probably "foul-up" an executive faster than anyone else unless possibly it might be a nagging, demanding spouse.

The wide spectrum of duties assigned a secretary by a superior or superiors makes it difficult to state in definitive terms what attributes a secretary should have and what activities she should or should not perform to assist her boss. One type of boss may want a rather meek mannered secretary while another may want a dominant, aggressive one. A secretary may be able to follow detailed instructions while in other cases she may be desired to exercise initiative. One type of boss gives all responsibilities to her in his absence whereas others want her to assume no responsibility unless specifically assigned. But one thing is for certain, there should be a mutual understanding as to what her duties are and what her relationships should be.

What Makes a Good Secretary?

What attributes are a prerequisite for her job? It all depends. It depends because the personality traits sought in an executive secretary are often intangible and vary as they should with the personality traits and demands of her boss. The two work so closely together that mutual, compatible respect and rapport must prevail or both will exist in a life of veritable hell.

Regardless of the specific personality traits of a secretary this much is for certain that she is typically more than a stenographer, more than a typist, more than a receptionist, more than enjoyable companion and more than a file clerk.

Executives were asked in a survey conducted recently, "How do you feel your secretary helps you to perform your job better?" To this question the following replies were received.*

One - Takes care of details and this frees me to have time to do things only I can do.

Two - Prepares a portfolio of essential information I need for writing reports or attending conferences.

Three - Gets to the office before I do and has my mail sorted. Notes what critical things I have to get done in order of priority.

Four - When I am down in the dumps she cheers me up and when I'm joyful about something she shares my joy.

Five - Protects me from unnecessary intrusions and interruptions but, too, can recognize when the person or situation demands my attention.

Six - Is willing to work overtime or on weekends without complaining if an emergency arises.

Seven - Conducts herself in a way that my wife or my acquaintances don't consider her being familiar or forward with me.

Eight - Any complaints or criticism which she feels might help me is always discreetly presented to me in private.

Nine - When my appearance is not up to what it should be she lets me know.

Ten - Handles a great many letters and telephone calls herself and has a "feel" for what I would say or do.

Eleven - Is careful not to divulge to others confidential information about activities in our office.

Twelve - Squelches rumors before they work havoc in our organization.

Thirteen - Has her work so well organized that if she has to be gone for some reason someone else can take over without much difficulty.

Fourteen - Has a "feel" for whom in the organization she should do some work when requested by them and those she should politely decline for good reasons.

Fifteen - Dresses in a manner that is always acceptable and in the proper taste.

Sixteen - Frequently takes the load off of me by soothing many people who are ruffled about one thing or another.

Seventeen - Unofficially can take action in situations to resolve them where if I as the boss would do something it would probably become a major issue.

Some things that executives mentioned that they disliked in secretaries were as follows:

1. Failure to follow instructions.
2. Disclosing confidential business matters to others.
3. Making the office a social center.
4. Taking considerable time at her desk or somewhere in the office to put on makeup.
5. Conducting personal business in the office.
6. Being curt or discourteous particularly to people that can hurt one's career.
7. Making mistakes in recording dates, appointments and details that foul up relationships.
8. Expecting to be pampered and cared for as a child.
9. Promising to do something and not following through and doing it.
10. Being absent from work a lot for a number of reasons.
11. Antagonizing those who work for lower ranking executives.
12. Expecting presents from me on her birthday, Christmas and other occasions.
13. Not communicating messages via the media or in the form suggested.
14. Put off doing jobs that are distasteful to her or she feels are beneath her dignity.
15. Griping about having to do things over.
16. Saying things about me that are derogatory.

Almost invariably those secretaries that move ahead either in position, prestige or monetary reward are not only efficient in handling details but even more important have the ability to handle people.

Attitude may be defined as the tendency to do, perceive, think or feel a certain way. Values, popularly called your conscience is a secretary's guide for distinguishing right or wrong. If a secretary has one value system and her boss another value system you can bet your bottom dollar there will be continual conflict between them. One type of secretary simply tries to act as she imagines a boss would want her to act. A little more alert and intelligent secretary tries to put herself in the place of her boss and to imagine what her boss wants. However, the most successful secretaries are usually those that seek to give their boss what he really wants, not what he ought to want, or what she imagines an ideal boss should want.

A good secretary learns to listen carefully to what her boss says and to check his cues and actions that are indications of what he wants. Often secretaries say, just how do I get a "feel" for a boss's wants, needs and desires. Suggestions made by secretaries considered successful are as follows:

------Listen to what the boss asks for.

------Observe the things you do he compliments you for and those he openly or silently chastizes you for not doing or doing in a way displeasing to him.

------Note the things that irritate your boss or make him impatient.

And finally, if you can't always psyche him out by the above means, from time to time just ask him outright what he wants and how he wants it done.

It is often said success breeds success. However, for an executive secretary who successfully functions over a period of time there is a hidden danger. There is a tendency for such an executive secretary without realizing it to cease being a helpmate to her boss and instead attempting to dominate him.

A good executive secretary must gain and retain the esteem of the group above her, beside her and below her. As one sage observed stated, "one man may advance a person to an executive secretarial job but it takes all the people with whom she associates to keep her there." A secretary can be a star - or a heel. A great deal depends on the working relationship that exists between a secretary and those she works with.

---

*Survey of 100 executives conducted by class participants at Washington University, St. Louis, Missouri, Spring, 1977.

The Dean's Corner

A popular song of a few years ago, in depicting the unhappy state of mind of the singer contained the line, "Spring's a little late this year." And so it is this year, too. In the midst of our present travail, the birds seem to sing a little less joyously. The daffodils, when they finally bloomed, somehow did not provide their accustomed fragrance. The azaleas displayed their glory much later than usual and their inspiring beauty was even more transitory. April showers did not fall with their usual caressing softness, but instead the rains came only in harsh deluges. The stirring vibrancy which in most years builds into a wonderful crescendo with the coming of May, somehow has not done so as of this writing during the first week of May. But spring is here, though without its splendid superlatives. And winter has been defeated; it has always been thus.

So it is with the life of the nation just now. The winter season definitely envelopes us, and some have become so discouraged that serious doubts as to the ultimate arrival of spring abound. But spring will break through again, even though our troubles seem endless meanwhile. Albeit, it may lack its old vibrancy. Unlike this changing of the seasons which we have no control, many of our present woes associated with the present season of despair were self-inflicted, and can be remedied if we are willing to make the necessary sacrifices to do so. Thus far, there seems, however, to be little willingness to do so.

What are the things which **are really** disturbing us in these trying times, and is there hope for amelioration? In answer to the last part of the question, the answer is an unequivocable, "perhaps."

It seems that the causes of anxiety are: economic insecurity, the cost of owning and driving automobiles, inflation in general, the deterioration of the economic, political and military eminence of the United States, the increasing role of government, heavy taxes (especially where there is little evidence of good from excessive government expenditures) and a few other miscellaneous worries.

In terms of economic insecurity, the continuous talk of an impending recession for a long while has made many people fear for their jobs. Now that the recession has struck hard in two of our leading industries, many are losing their jobs and many more are living in constant fear of doing so. With the present cost of living and astronomical house and car payments, even a short lay-off would be disastrous in those families with only one income. For those who have bought homes in recent times the monthly payments correspond with total monthly salaries or wages only a short while ago. Interest rates and escalating construction costs, (both wages and materials) have made the prospects of home ownership rather remote for most non-home owning people. This, in turn, has led to such a slow down in construction (drastically off from a year ago) that unemployment has become serious. The excessive prices for American automobiles, the poor mileage performance and fears concerning the cost and availability of gasoline have led to a crises situation in that industry with countless thousands of unemployed. Of course, the exorbitant wages and fringe benefits demanded by the automotive union were responsible in large measure for the problems of the industry. Meanwhile, those automotive workers who are unemployed will receive almost the same income as when they were working, supported by taxpayers and consumers. Now the unions and their lackeys in Congress are demanding that we reduce auto imports to protect them in their excesses at the expense of the belabored consumer. The steel industry (also plagued by a demanding union) is now beginning to suffer as the result of the construction and automobile industry shut downs. The economic insecurity generated in these centers is rapidly spreading to those areas wherein the workers are innocent of having heavily contributed to the problems. A little restraint along the way and a little willingness of management to fight unreal union demands would have presented these problems. With each price increase the increase in wages which followed without increases in productivity contributed heavily to the inflation which is the cause of much of our troubles. We can overcome these problems.

The dread of having to give up private automotive transportation is also basically one of the leading things troubling Americans. We have come to believe that there is an inherent right to be able to step into our automobiles and venture forth to any place we desire without restraints. The thought of being denied this is somewhat traumatic to all of us, and gives real cause for anxiety. We simply must adjust to a disruption of this luxury enjoyed by the past generation and by the present one thus far. Perhaps meanwhile the bus lines will learn to schedule intelligently so as not to require approximately twice as long as it should to move from one point to another any distance away. With this innovation and the provision of clean rest rooms and eating facilities along the way, bus travel would pick up immensely—provided the fares do not skyrocket as airline fares have. Increased fuel costs have accounted for a considerable portion of airline fare increases in recent times, but not altogether. The compensation schedule for many segments of the industry is nothing short of outrageous. For example, pilots trained at public expense receive salaries far in excess of university presidents and governors in many cases. This is ridiculous and the only explanation is that they belong to a strong union. Other active personnel who belong to unions also receive salaries and wages which are in many cases much higher than comparable work. Why? Simply because they belong to powerful unions.

The railroad workers' unions contributed heavily to the demise of a fine railways system in this country. There was a time in the memory of the writer when one could travel fairly comfortably and cheaply by rail either on long or short trips. The passenger train network between cities, large and small, was extensive. Perhaps the most unfortunate event in the history of this nation was the rush with wild abandon to an automobile oriented culture. Almost every facet of life was significantly changed by this. In two generations of at least one gas guzzling monster per family we have recklessly wasted enough resources to have lasted many generations. At this institution, for example, there seems to be almost one vehicle (practically new) per student, and it seems that almost all drive to their homes nearly every weekend. What a waste! We, as a people, simply cannot afford this. Not that the students should be blamed; they are simply a part of our thoughtless society, and only one example of this profligate practice. The writer is also guilty of this waste.

Think of the opportunity costs (a term used in economics to describe alternative use of resources) involved in the production of millions of gas guzzlers annually and in the construction of highways and in the sale and maintenance of automobiles and in the exploitation of petroleum! It boggles the mind. What wonders we could have experienced with these wasted resources (human, natural and financial) no one is capable of imagining! The number of automotive vehicles produced annually in the U. S. alone, would, if packed bumper to bumper, extend around the world at the equator and far beyond. Try to comprehend the immensity of this folly. **Every year**, this number is produced! No wonder we are rapidly losing the "numero uno" place in the scheme of things. With this kind of stupidity we deserve it. The answer is simply to try to regain our sanity, sacrifice sufficiently to rebuild a satisfactory public transportation system, and pray that we can somehow discover better leaders in Washington than we have had for a long while now. We are capable of doing these things (including praying for better leaders) if we are made aware of the critical needs, and if given the right kind of leadership.

Another reason why "spring is a little late this year," that is to say, why the winter of our national life seems hard upon is the sudden loss of the clear eminence of America in economic, political and military areas. Beginning, perhaps, with World War II, after providing resources to rebuild the world as well as fighting the war, we began sewing the seeds for our present problems. The fiasco of two no-win wars in a row (during which both "guns and butter" were provided, with no one called upon to make sacrifices except those drafted) contributed heavily to our problems. Irresponsible budgetary undertakings by the Federal government (unbelieveably so) along with reduced productivity (at a time when other nations were making tremendous improvements), and unconscionable demands by monopolistic labor unions (to the extent that common workers in some industries are being compensated like professionals and far beyond their contributions) have priced us out of world markets in areas where we completely dominated a few scant years ago. This has contributed to the demise of the dollar as the "world currency," especially after our adverse balance of payments for so many years necessitated our abandonment of hard money. As of March, 1973, the dollar was no longer redeemable in gold by foreign governments and central banks. Prior to that, in 1966, Congress repealed legislation requiring Federal Reserve Banks to maintain 25% gold certificate banking for member bank deposits. In 1968, Congress likewise repealed the requirement for 25% banking in gold certificates against Federal Reserve notes. This was the beginning of the end of sound money in this nation, and was indicative of the general philosophy prevailing in Washington, that we as a nation need not worry about the consequences of our acts. "Pie in the sky" was the order of the day, and unfortunately, still is.

Economic decline relative to other nations has resulted, also, from the deplorable state of our productivity accompanied by rapidly increasing labor costs. Essentially all nations of any consequence in the economic arena have vastly outstripped us in productivity gains. Increased productivity results from improved technology and upgrading capital goods. Not much of either has been taking place, relatively speaking, in the U. S. in recent years. Our saving rate is **far below** an acceptable level and far below that of other leading industrial nations. We have been too busy consuming "our seed corn" to think about tomorrow. We seem to have been emulating the profligate grasshoppers, rather than the ants. This can be ameliorated by returning to the old virtues upon which the greatness of this nation was predicated, hard work, thrift and a high level of moral attainment. Again, given the right leadership, this could be achieved. It seems that we are ready for this.

In terms of political leadership this nation has clearly passed from the dominant nation category. This is probably a good thing. Trying to carry out this role somehow led us to believe that we were the font of all goodies. Nearly a hundred nations were receiving aid in some form or other from us. This contributed heavily to the near "bankruptcy" of the dollar. We maintained a favorable trade balance until recent years, but our adverse balance of payments (resulting from our playing Santa Claus) led to a constant erosion of the dollar, especially as we became deeper involved with the beginning of adverse trade balances. In any case we no longer "call the shots" internationally. It has been difficult to get most of the nations, whom we aided at great sacrifice to our future well being, to give even token support in our present travail in Iran and Afghanistan. Most nations will not even support the U. S. stand relative to the invasion of Afghanistan by Russia, which stand, incidentally, indicates that we are not entirely aware that we no longer dictate world affairs. Our continued attempts as the "world peacemaker" have more or less left us "high and dry." Many nations wish to carry on with Russia on a "business as usual" basis, even to play games with them in Russia! A Russian domination of the oil rich Middle East could be endured by the U. S. better than by most of the nations who are refusing to support our efforts.

In terms of our decline in military strength, it is doubtful that the current quip that "a well organized troop of Brownie Scouts could take over the country" is true. It would probably require two or three troops. It seems that our arms orientation has placed us in the position of having to kill flies with cannons. We have the powerful weapons, but will not or cannot bring ourselves to use them for humanitarian reasons and out of fear of reprisal by Russia. Things have changed since we lost our monopoly on the atomic bomb. The voluntary army concept seems to be a disaster, and the compensation and retirement programs in the armed services have left us in a dilemma. The present program allows military personnel to retire after only twenty years service and receive compensation for a much longer period than they served. It is, of course, necessary to have a professional military force, but it does seem that even if service personnel leave the services at a young age (39 or 40 in many cases) they could wait until 60-65 to start drawing retirement. Many draw high retirement incomes for as many as 25 years before the time that most Americans can begin to receive retirement incomes. The writer of this column is not anti-military, and he realizes that there are problems associated with the armed services that he does not understand. However, a high ranking officer some time ago indicated that the retirement program was in time going to "bankrupt the nation." It could not be reduced as long as those who particiapted in it are alive, it seems. This would be a break of faith, but it is time that an intelligent study be made relative to the future, and this is badly needed now. In any case the annual military budget is now far in excess of the total federal budget only a very few years ago, and we seem incapable of dealing with any sort of crisis requiring military action. A Congressman recently stated that he did not believe we could expect to have the draft again until the enemy was literally on our shores. It will, of course, be far too late, then. With regard to military strength, we can resign ourselves to becoming a second rate military power or else become more effective in the use of budgetary funds. It seems inconceivable that we could be expected to put more into the military budget than is now the case. Most nations in the world have a much smaller total budget than our military budget. Meanwhile, prayers for peace should be uppermost in our hearts, so that military action will never be needed. It seems inconceivable that here in the last quarter of the twentieth century and with the level of civilization claimed by the nations of the world, it would be necessary to resort again to wholesale slaughter of fellow human beings in the name of the barbarous custom of war. Realistically, however, we should be prepared for this evantuality, because in such barbaric "nations" as Iran anything can happen.

Another course for anxiety is the increasing size of government, not only in terms of its cost but also in terms of the ever increasing role it plays in the lives of private citizens. There is now someone receiving some sort of funds from the government for every person working. The countless hordes of drones on the federal payroll, prying into and regulating almost every facet of our lives represents a development completely foreign to the American way, and Congress which created this Frankensteinian monster seems incapable of or unwilling to do anything about it. A recent public attitude survey commissioned by Union Carbide disclosed that well over half of Americans thought that government programs should be cut back and only fourteen percent thought they should be expanded. One could easily guess who constitutes this fourteen percent. Eighty-two percent believed that the Federal government continues programs which are no longer useful. If Congress is cutting back any significant number of these, little attention is given to the process in the news media.

Closely associated with "big government" is the heavy tax burden we are expected to pay, that is, those of us who pay taxes. It seems that a recent report stated that the average tax payer now works through May of each year to support the government. The contributions to the Social Security Program, in addition to increasing income taxes, absorbs a considerable portion of the wage and salary earners' income. As indicated in a previous Deans Corner, if the typical 35 year old middle management person were allowed to invest social security contributions (his or her's and the employer's) in an annuity, at 65 the annual income from the accumulated fund would be 3 or 4 times the amount received from social security annually—and the **principle** would never be touched. Congress has made of social security another dole program; that is, benefits do not correlate with contributions. Perhaps, initiating the withholding practice has taken the bite out of income tax payments to some extent. Should each person be required on April 15 to "cough up" the entire amount of taxes due for the previous year in one lump sum, the collective wailing would be so loud that even the politicians in Washington would get the message. As it now is the tax collection process, as in the case of the current government-generated inflation, is simply a sneaky way of disguising the tax bite individuals and firms must pay.

These and a few other miscellaneous problems are the cause of our anxieties and insecurities. That is why the current "winter of our nation's life" seems to drag on inordinately. This is why "spring's a little late this year". And to repeat an earlier statement, we cannot control the seasons, but it is within our power to bring "spring" back into our national lives. It is the firm belief of the writer that this will be done.

—Gaines M. Rogers, Dean

Consumer Attitudes and Buying Plans

The confidence of American consumers and their buying plans have fallen sharply again, The Conference Board reports today.

The Consumer Confidence Index (1969-1970= 100) plummeted to 41.9 in May, an 11-point decline from April. Consumer confidence has now fallen for seven consecutive months and is very near its all-time low registered at the bottom of the last recession in the late 1974 Buying plans are at their lowest levels in the 12-year history of the survey.

The survey, which covers 5,000 households throughout the country, is conducted monthly for The Conference Board by National Family Opinion, Inc. of Toledo, Ohio.

The proportion of families labeling business conditions "bad" jumped to 37% in May, up from 25% in April. Some 40% report that jobs are "hard to get," compared with 32% the previous month. Looking ahead, only 24% of the families believe their earnings will rise during the next six months, down from 30% in April. More than 13% fear their incomes will decline, up from about 12% in the previous survey.

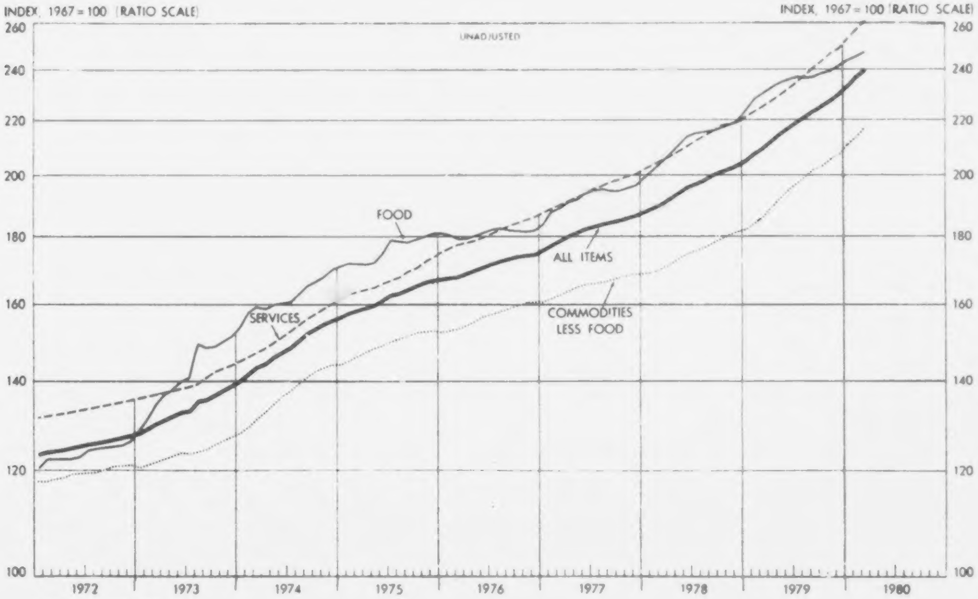
A SILVER LINING

"While the loss of consumer confidence over the last two months has been of record magnitude," explains Fabian Linden, director of consumer economics at The Conference Board, "there may be a positive element in the suddenness of the decline. The consumer's disenchantment is now so marked that any improvement is the economic situation is likely to make for some spurt in consumer spirits and their return to the retail counter—a prime requirement for a business recovery."

Source: Consumer Attitudes and Buying Plans; May, 1980; The Conference Board.

CONSUMER PRICES

In March, the consumer price index for all urban consumers rose 1.4 percent (also 1.4 percent seasonally adjusted). Food prices rose 1.0 percent (also 1.0 percent seasonally adjusted). Nonfood commodity prices rose 1.4 percent (1.3 percent seasonally adjusted) and services prices were up 1.8 percent (1.9 percent seasonally adjusted).



SEE NOTE ON TABLE BELOW
SOURCE: DEPARTMENT OF LABOR

[1967=100]

Period	All items	Food	Commodities less food	Services	All commodities	Food			Commodities less food			Services
						All	Food at home	Food away from home	All	Durable	Nondurable	
1972	125.3	123.5	119.4	133.3	120.9	123.5	121.6	131.1	119.4	118.9	119.8	133.3
1973	133.1	141.4	123.5	139.1	129.9	141.4	141.4	141.4	123.5	121.9	124.8	139.1
1974	147.7	161.7	136.6	152.1	145.5	161.7	162.4	159.4	136.6	130.6	140.9	152.1
1975	161.2	175.4	149.1	166.6	158.4	175.4	175.8	174.3	149.1	145.5	151.7	166.6
1976	170.5	180.8	156.6	180.4	165.2	180.8	179.5	186.1	156.6	154.3	158.3	180.4
1977	181.5	192.2	165.1	194.3	174.7	192.2	190.2	200.3	165.1	163.2	166.5	194.3
1978	195.4	211.4	174.7	210.9	187.1	211.4	210.2	218.4	174.7	173.9	174.3	210.9
1979	217.4	234.5	195.1	234.2	208.4	234.5	232.9	242.9	195.1	191.1	198.7	234.2
	Unadjusted				Seasonally adjusted							
1979: Mar	209.1	230.4	185.9	225.1	201.3	230.6	229.9	235.9	186.8	185.8	186.6	225.5
Apr	211.5	232.3	188.9	227.0	203.4	232.0	231.0	238.0	189.1	187.3	190.0	227.5
May	214.1	234.3	191.6	229.5	205.3	233.5	232.1	240.4	191.1	188.5	193.2	230.2
June	216.6	235.4	194.7	232.1	207.4	234.2	232.4	242.2	193.7	190.0	197.2	232.6
July	218.9	236.9	197.0	234.7	209.6	235.3	233.0	244.3	196.2	191.5	201.1	235.1
Aug	221.1	236.3	199.5	237.6	211.5	235.5	232.5	246.1	198.7	193.1	205.2	237.7
Sept	223.4	237.1	201.8	240.7	214.0	237.9	235.4	247.5	201.2	194.2	208.6	240.5
Oct	225.4	238.2	203.4	243.6	215.8	239.8	237.1	249.9	202.9	195.7	210.3	243.5
Nov	227.5	239.1	205.4	246.2	217.9	241.4	238.5	252.0	205.1	198.4	212.0	246.1
Dec	229.9	241.7	207.2	249.3	220.4	244.8	242.3	254.4	207.3	200.3	215.0	249.5
1980: Jan	233.2	243.8	210.4	253.1	223.5	244.8	241.8	256.9	211.5	202.5	221.8	252.9
Feb	236.4	244.9	213.8	256.8	226.1	244.7	240.9	258.6	215.2	203.5	228.4	256.8
Mar	239.8	247.3	216.7	261.3	228.8	247.1	243.5	260.6	217.9	204.0	233.8	261.6

NOTE.—Data beginning January 1978 relate to all urban consumers. Earlier data related to urban wage earners and clerical workers.

Source: Department of Labor, Bureau of Labor Statistics.

Tourist Briefs

Mississippi Governor's Mansion

Jackson, Mississippi

The Mississippi Governor's Mansion, constructed from 1839-1841, and restored from 1972-1975, is the second oldest executive residence in the United States that has been continuously occupied by governors.

Governor and Mrs. William Winter and their family moved into the Mansion on January 22, 1980. In a statement to the public, Governor Winter said: "Since 1842 the Governor's Mansion has stood as a proud monument to the people of Mississippi.It has survived the wear of war and time, escaped the hand of progress, and engraved lasting traditions of hospitality on the character of our state. It has witnessed the full drama of Mississippi's past, and from its halls have come many of the decisions which have shaped the course of history."

The Mississippi Governor's Mansion has served as the official residence of the state's first families since 1842. It is the second oldest executive residence in the United States that has been continuously occupied by governors. From the very beginning, the Mansion has been a landmark of historical significance. In 1833, the Legislature passed an act providing for the construction of a "suitable house for the governor, in the town of Jackson," and appropriated $10,000 for that purpose. At that time Jackson was a small community of perhaps a dozen families. The construction of the new statehouse (now the Old Capitol) and the state penitentiary, as well as the Panic of 1837, delayed work on the Mansion, which was finally completed in 1842 at a cost of approximately $61,000. In February of 1842, Governor Tilghman M. Tucker and his family became the first family to occupy the new executive residence.

The classic Greek Revival architecture employed by state architect William Nichols was designed to "avoid a profusion of ornament, and to adhere to a plain republican simplicity, as best comporting with the dignity of the State." The principal structure was designed primarily for state functions and visiting dignitaries, with a basement, a main floor consisting of an octagonal vestibule, a large drawing room on one side, and a dining room that could be enlarged by the use of folding doors on the other, and a grand staircase; and a second story comprising a central hall and four spacious bedchambers. A small extension on the north side consisted of a basement and a suite of four family rooms, and was to be used for the personal accommodation of the first family. This extension, or the north wing, was replaced in 1908 by a two-story annex, which was in turn replaced by a townhouse addition in 1975.

Jackson was invaded by Federal troops four times during the Civil War; the confusions and alarms of battle swept about the Mansion as Federal batteries hammered shells into the little capital. Put to the torch by Sherman, much of Jackson was destroyed by fire in 1863, but the Mansion survived and was the scene of a victory dinner given by General Sherman after the fall of Vicksburg.

Through the reconstruction years, the Mansion stood as a symbol of the endurance and strength of Mississippi. In 1908, the Legislature took under consideration the disposal of the Mansion to make room for commercial development. This proposal prompted various civic and patriotic organizations to wage a "Save the Mansion" campaign, and the Legislature was asked, "Will Mississippi destroy that which Sherman would not burn?" The bill to move the Mansion was defeated and a major remodeling was undertaken.

Following this remodeling, which removed the grand staircase to give access to the family annex, little was done to change the Mansion for many years. In the early 1940's Governor Paul B. Johnson, Sr., had the yellow brick exterior of the Mansion painted white, and in 1944 the State Building Commission authorized the purchase of historic furnishings. However, by 1971 structural deterioration had taken its toll, and was so advanced that the first family was advised to vacate the building.

In 1972, a $2.5 million restoration was undertaken, and during the next three years the Mansion was restored to its original plan. Historical records were searched for information on the Mansion's early interiors, some of the finest of the period. Details of design were reconstructed or restored to approximate the original workmanship, and museum quality antiques, appropriate to the 1850s, were acquired to furnish the historic house.

Because of the historical significance and classic architectural design of the building, the Mansion was designated a National Historic Landmark by the U. S. Department of the Interior in 1975. It is one of the only two executive residences in the nation designated as National Historic Landmarks.

Since Henry Clay was entertained at the Mansion in 1843, many other distinguished guests have visited there, including Jefferson Davis, L. Q. C. Lamar, Louis Kossuth, William Jennings Bryan, William Howard Taft, Theodore Roosevelt, John F. Kennedy, Princess Juliana of the Netherlands, Lord Halifax of Great Britain, Van Cliburn, Will Rogers, Lyndon Johnson, Sam Rayburn, Eleanor Roosevelt, Margaret Chase Smith, Adlai Stevenson, Pat Boone, Rosalyn Carter, Jimmy Carter, Eudora Welty, Leontyne Price, and Joan Mondale.

Source: Mississippi Department of Archives and History.

MEET THE FACULTY

Dr. Z. William (Bill) Koby

Dr. Z. William Koby is Director of the Division of Business Services at Mississippi State University. Dr. Koby received his B.S.B.A. and M.B.A. from Ohio State University and his Ph.D. in Marketing, Management, Economics, and Statistics from the University of Texas.

Before coming to Mississippi State University, he was co-owner of the fourth largest individually owned advertising and marketing agency in Houston, Texas. He also served as Staff Consultant for Reed Roller Bit Corporation and General Motors—Chevy Division. In 1959 Dr. Koby founded the Southwestern Marketing Association. From 1942-1946 he served in the U.S. Army and reached the rank of Captain.

Dr. Koby states that under his direction that the Division of Business and Industry is currently generating approxiamtely $250,000 worth of InService Training Contracts annually. According to a recent study by the Southern Association, Mississippi State University's College of Business and Industry has the most active in-house training in the South. The College of Business and Industry is also a leader in the Small Business Assistance Program in Mississippi, currently consulting from 10-40 small firms a year.

Correlating all of the Business Policies Courses, selecting faculty, and writing syllabi also falls under his responsibilities.

Dr. Koby has been active in a number of civic and professional organizations, which include the American Marketing Association, Southwest Social Science Association, Southern Economics Association, Southern Marketing Association, Lions Club, Kiwanis Club, Pi Sigma Epsilon, and the Mississippi Hear Association, just to name a few.

Dr. Koby and his wife, Carol Ann, have four sons and one daughter. They are Tony, an attorney; Tim, a veterinarian; Tom, a Lieutenant on the Houston, Texas Police Force; Toby, a high school teacher; and Tracy Ann, an accountant with Exxon. Mrs. Koby is the insurance clerk at the Student Health Center. Playing golf and raising children are what Dr. Koby enjoys doing in his spare time.

STATE ECONOMIC INDICATORS

Indicator	April 1980[10]	March 1980[11]	April 1979[11]	Per Cent Change	
				One Month Ago[12]	One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	1,009,100	1,004,600	970,000	0.5	4.0
Non-Ag Employment	835,700	836,600	834,100	−0.1	0.2
Mining	9,900	9,800	9,200	1.0	7.6
Contract Construction	43,400	43,400	46,000	0.0	− 5.7
Manufacturing	225,800	227,900	233,600	−0.9	− 3.3
Transportation and Public Utilities	41,700	41,600	39,800	0.2	4.8
Wholesale and Retail Trade	162,400	162,300	161,500	0.1	0.6
Finance, Insurance and Real Estate	33,100	33,100	32,600	0.0	1.5
Service	120,600	120,100	116,900	0.4	3.2
Government	198,800	198,300	194,500	0.3	2.2
Unemployment Rate (Per Cent Labor Force)	6.4	6.4	5.3	——	——
Average Weekly Earnings in Manufacturing	208.36	210.65	186.03	−1.1	12.0
Average Hourly Earnings in Manufacturing	5.37	5.36	4.87	0.2	10.3
Average Weekly Hours in Manufacturing	38.8	39.3	38.2	−1.3	1.6
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,248	3,151	2,963	3.1	9.6
Gasoline delivered to Dealers (gals.)[3]	111,203	100,703	130,007	10.4	−14.5
Dairy Production					
Milk (lbs.)[4]	76,000	74,000	76,000	2.7	0.0
Egg Production[4]	132,000	139,000	144,000	−5.0	− 8.3
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	21,100	24,700	26,900	−14.6	−21.6
Construction Loans	1,900	1,800	3,100	5.6	−38.7
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,554,343	1,683,232	1,515,233	− 7.7	2.6
Telephones in Service[7]	1,487,926	1,482,519	1,422,025	0.4	4.6
RETAIL SALES TAX COLLECTIONS[8]	1,131,457	1,090,240	901,165	3.8	25.6
AGRICULTURE (ooo's)[9]					
Total Cash Receipts from Farm Marketings					
Cash Receipts from Marketing Livestock					
Cash Receipts from Marketing Crops					

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for February

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S. Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago
Aberdeen	9.2	1.1	8,180	0.5	5.4	38,440	8.5	19.4	57,900	127,900	48,700
Baldwyn	— 7.0	1.1	4,679	0.4	5.8	19,615	20.8	24.0	——	——	——
Batesville	6.4	— 9.8	8,668	0.4	6.0	44,788	— 2.8	33.0	81,500	65,000	41,500
Bay Springs	——	——	——	——	——	21,265	11.0	32.9	——	——	78,000
Bay St. Louis	——	——	13,274	0.3	7.9	28,135	— 0.4	27.9	126,000	151,410	268,394
Belmont	— 8.8	— 3.5	2,256	1.0	5.7	7,763	0.8	— 7.6	——	——	——
Belzoni	——	——	4,892	0.8	7.1	25,119	9.9	53.2	45,900	13,000	424,678
Biloxi	——	——	45,510	1.2	2.7	206,944	— 3.3	29.9	628,205	602,235	1,015,050
Brandon	——	——	11,620	1.1	1.5	26,182	15.8	27.1	1,480,500	677,500	561,000
Brookhaven	——	——	15,928	0.3	2.6	89,691	— 3.7	19.4	——	——	——
Brooksville	——	15.0	1,333	0.2	4.2	2,216	—16.0	—21.9	——	——	——
Canton	——	——	10,678	0.2	4.4	53,327	— 8.8	6.4	——	22,767	27,100
Carthage	——	——	7,431	0.4	6.7	34,223	14.1	23.6	13,800	3,500	20,000
Charleston	7.3	0.1	4,107	0.4	3.5	12,090	—23.8	—23.0	——	——	——
Clarksdale	— 0.3	—19.1	20,943	0.4	4.7	102,660	3.4	14.7	92,500	210,800	105,350
Cleveland	——	——	14,105	—0.3	3.2	77,295	— 0.6	8.0	——	——	254,000
Collins	3.7	10.8	4,618	0.1	3.3	33,164	— 7.8	29.3	——	——	30,000
Columbia	——	——	15,600	0.3	4.6	62,895	3.1	20.7	——	——	——
Columbus	3.0	18.1	33,447	—0.7	3.0	188,443	4.6	28.7	236,324	243,855	502,536
Corinth	7.4	12.5	20,735	0.6	5.1	96,273	10.8	10.3	110,630	1,127,704	210,379
Crystal Springs	——	——	5,885	0.3	6.3	20,187	0.5	— 7.5	47,500	84,000	33,500
Drew	——	——	2,730	0.6	4.9	8,675	—14.7	—18.6	——	2,500	20,000
Edwards	5.1	——	1,657	1.7	6.0	3,169	— 5.7	—23.8	——	25,000	25,000
Ellisville	—10.5	47.8	3,888	0.3	7.2	11,686	— 6.6	7.5	——	——	——
Eupora	2.2	— 3.3	4,394	—0.1	5.5	15,822	12.4	9.1	——	——	——
Fayette	— 6.8	3.9	3,306	0.3	6.2	8,641	11.2	27.8	——	——	——
Forest	— 2.0	20.4	5,094	0.4	5.0	45,988	2.3	37.2	40,000	26,000	——
Greenville	5.1	——	37,083	0.7	4.8	213,666	6.1	21.7	——	——	——
Greenwood	——	——	23,969	0.3	3.0	128,104	3.7	22.4	315,053	967,500	176,600
Grenada	——	——	14,212	0.4	4.5	63,330	— 7.2	3.5	42,400	44,950	90,120
Gulfport	——	——	61,160	0.5	5.0	211,164	— 2.2	21.7	1,407,862	4,646,521	1,545,274
Hattiesburg	——	——	59,464	0.2	5.8	293,620	7.2	19.6	2,569,488	1,455,894	790,453
Hernando	——	——	7,111	0.9	6.3	19,767	6.1	27.6	122,875	32,000	160,000
Hollandale	2.3	44.6	3,391	0.6	5.9	12,296	11.6	46.0	——	——	——
Holly Springs	——	——	7,362	0.9	4.6	31,813	11.2	12.8	——	——	——
Houston	——	——	5,593	0.6	3.6	20,864	— 3.1	— 4.6	1,600	400	199,950
Indianola	— 3.9	20.7	7,826	0.3	5.0	54,259	— 4.9	23.8	——	——	——
Iuka	——	——	5,501	0.5	10.6	22,977	3.7	17.6	——	——	——
Jackson	——	——	224,982	0.3	4.2	1,244,003	1.2	35.1	9,868,934	8,749,533	5,194,444
Kosciusko	——	——	9,575	0.4	3.8	44,180	5.7	12.6	94,300	105,200	38,333
Laurel	6.9	15.2	34,294	0.4	5.0	205,013	3.5	20.3	2,287,426	500,169	380,807
Leland	——	——	5,103	0.8	5.8	16,746	9.5	27.8	40,950	283,150	102,200
Lexington	——	——	4,786	0.0	4.5	15,277	— 7.1	3.8	——	——	——
Louisville	12.5	20.9	10,648	0.5	4.1	45,191	4.5	21.4	306,877	34,977	161,000
Lucedale	——	——	8,271	0.6	7.2	33,662	20.7	28.1	40,500	58,000	63,750
Lumberton	——	——	2,918	0.2	4.1	7,144	6.7	32.6	——	——	——
Macon	——	——	3,735	0.4	1.6	12,795	4.7	1.7	——	——	——
Magee	——	——	5,274	—0.2	4.7	35,336	3.2	36.5	——	——	——
Magnolia	8.7	— 8.2	4,206	1.0	5.0	7,897	—15.3	21.7	——	87,680	136,900
Marks	— 5.5	50.4	5,530	0.5	5.0	12,102	—13.3	— 6.6	——	——	——
McComb	——	——	19,736	0.0	4.9	92,721	— 3.7	13.6	70,600	573,371	322,600
Meadville	—15.2	— 2.4	——	——	——	4,712	—10.1	6.5	——	——	——
Mendenhall	2.9	1.1	6,520	—0.2	5.4	16,533	—14.0	—11.8	10,000	47,946	2,700
Meridian	——	——	48,088	0.2	4.1	313,030	6.9	22.2	715,457	615,426	13,759,640
Monticello	24.3	15.9	4,833	1.0	7.5	17,172	14.0	23.5	31,000	35,000	——
Morton	——	——	3,466	0.4	2.4	14,911	—17.5	—11.4	——	——	——
Moss Point	—31.4	—27.7	16,811	0.6	3.0	35,359	5.3	8.3	147,950	333,600	205,573
Natchez	— 2.1	14.8	29,501	0.3	5.6	183,888	— 8.2	31.0	233,205	298,959	316,025
New Albany	—34.5	——	11,170	0.4	4.7	44,073	4.7	31.1	139,000	118,552	189,350
Newton	——	——	4,052	0.0	3.2	20,168	9.1	27.7	31,500	31,800	145,700
Ocean Springs	6.7	9.7	15,765	0.1	3.6	60,797	8.6	27.1	524,140	529,754	353,112
Okolona	1.1	— 9.2	3,421	0.6	4.0	11,006	—11.8	— 6.1	——	——	——
Oxford	—17.4	—22.0	21,458	—0.1	3.6	73,308	3.8	26.4	93,320	40,000	139,800
Pascagoula	4.5	——	34,931	0.7	2.4	192,110	3.2	31.7	845,868	358,220	835,114
Pass Christian	——	——	5,507	0.4	3.2	8,222	1.9	0.9	114,000	17,300	24,800
Philadelphia	——	——	11,446	0.1	4.7	44,409	1.9	33.5	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago	Current Month April	Month Ago	Year Ago
Picayune	−3.3	−1.7	15,095	0.0	5.5	61,838	20.1	18.9	111,000	77,000	318,998
Pontotoc	——	——	9,271	0.2	3.3	30,253	−4.2	−23.4	——	——	——
Poplarville	——	——	4,119	1.0	2.2	13,844	34.3	22.4	——	8,000	——
Port Gibson	13.4	36.1	5,727	0.9	7.5	16,302	29.8	34.1	——	——	——
Prentiss	——	27.6	4,424	0.4	4.7	15,805	−6.9	14.8	195,000	8,000	29,609
Quitman	7.1	19.8	4,869	0.2	5.1	21,783	−0.7	23.6	——	——	——
Raymond	6.6	19.2	3,179	−0.4	8.7	8,466	0.8	0.2	——	——	——
Richton	——	——	1,990	1.4	6.2	9,419	−7.8	45.1	——	20,000	14,000
Rosedale	10.5	2.6	1,620	0.3	1.4	5,635	−1.0	15.9	——	4,000	68,000
Ruleville	2.5	3.4	1,995	0.2	1.4	8,890	−15.2	15.4	5,000	5,600	23,550
Sardis	——	——	3,522	0.2	3.7	14,349	6.5	26.7	4,000	10,000	——
Senatobia	22.0	42.0	6,776	0.5	11.7	39,291	5.9	13.1	9,000	546,000	9,000
Shelby	5.0	34.8	1,674	−0.5	−0.5	8,909	3.9	14.8	——	——	——
Starkville	——	——	24,907	−0.2	4.5	76,226	4.2	29.7	1,098,500	1,164,000	258,000
Summit	——	——	1,615	−0.7	3.9	8,024	10.8	8.6	——	——	——
Taylorsville	−4.3	0.8	1,780	0.7	4.3	10,312	−2.8	12.2	——	——	——
Tchula	——	——	2,025	0.8	2.3	4,329	36.3	43.9	——	——	——
Tunica	——	——	4,327	0.4	5.5	14,323	2.6	1.5	——	——	——
Tupelo	−8.2	−12.2	37,446	0.4	4.6	243,778	−1.3	18.4	2,374,145	355,375	609,660
Union	3.3	−4.4	2,756	0.6	4.8	12,513	−5.0	23.6	——	——	——
Utica	3.4	−39.7	3,010	0.3	5.0	7,913	11.2	67.3	——	——	——
Vicksburg	−0.3	18.6	38,736	6.1	5.0	159,449	−5.3	32.2	347,800	409,610	238,717
Walnut Grove	——	——	1,019	0.9	5.1	1,390	15.3	15.5	——	——	——
Water Valley	——	16.1	4,024	0.2	4.9	18,747	13.0	−3.4	92,000	71,200	397,827
Waynesboro	——	——	7,531	0.7	8.1	51,573	6.3	32.7	36,700	170,000	24,000
West Point	−2.0	13.9	12,276	0.5	5.8	42,457	4.2	17.1	165,006	346,740	196,540
Wiggins	−2.4	13.0	6,196	0.1	5.6	17,928	−12.4	16.9	159,275	——	1,500
Winona	−7.3	2.5	5,003	0.2	3.5	26,645	10.1	14.3	——	9,400	35,700
Yazoo City	18.9	34.0	12,304	0.6	5.1	50,987	−6.1	−1.1	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	April 1980	March 1980	April 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	151,100	149,300	142,200	1.2	6.3
Unemployed Persons	6,400	5,800	4,700	10.3	36.2
Per Cent of Labor Force	4.2	3.9	3.3		
Employed Persons	144,700	143,500	137,500	0.8	5.2
Non-Ag Wage & Salaried	125,800	124,500	119,400	1.0	5.4
Manufacturing	17,100	17,300	16,400	−1.2	4.3
TELEPHONES IN SERVICE	244,448	243,740	234,793	0.3	4.1
CITY SALES TAX COLLECTIONS	1,289,733	1,270,442	959,024	1.5	34.5

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	April 1980	March 1980	April 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	63,480	62,780	60,890	1.1	4.3
Unemployed Persons	3,500	3,730	3,320	−6.2	5.4
Per Cent of Labor Force	5.5	5.9	5.5		
Employed Persons	59,980	59,050	57,570	1.6	4.2
Non-Ag Wage & Salaried	51,400	50,460	49,260	1.9	4.3
Manufacturing	8,100	8,120	7,830	−0.3	3.5
TELEPHONES IN SERVICE	112,177	111,307	112,269	0.8	−0.1
CITY SALES TAX COLLECTIONS	426,330	437,967	340,992	−2.7	25.0

[1] Preliminary

Gross Welfare Expenditures for Aid to Dependent Children Payment By by County July 1, 1978-June 30, 1979

Source: Mississippi State Department of Public Welfare.

COUNTY	Aid to Dependent Children
Adams	$ 1,089,172
Alcorn	200,875
Amite	195,373
Attala	315,213
Benton	176,417
Bolivar, E	1,413,201
Bolivar, W	597,168
Calhoun	234,567
Carroll	194,680
Chickasaw, E	91,164
Chickasaw, W	132,341
Choctaw	168,843
Claiborne	366,864
Clarke	244,074
Clay	491,169
Coahoma	1,550,620
Copiah	641,723
Covington	345,854
DeSoto	541,011
Forrest	866,063
Franklin	175,924
George	141,151
Greene	102,862
Grenada	456,738
Hancock	281,763
Harrison	1,867,232
Hinds	5,709,023
Holmes	1,490,296
Humphreys	626,919
Issaquena	88,701
Itawamba	53,991
Jackson	631,609
Jasper	342,356
Jefferson	414,402
Jefferson Davis	372,049
Jones	734,508
Kemper	154,121
Lafayette	285,628
Lamar	252,097
Lauderdale	1,396,494
Lawrence	170,487
Leake	303,500
Lee	421,435
Leflore	1,356,002
Lincoln	444,590
Lowndes	1,010,185
Madison	1,279,567
Marion	373,809
Marshall	986,216
Monroe	465,930
Montgomery	406,052
Neshoba	351,014
Newton	203,064
Noxubee	487,616
Oktibbeha	709,616
Panola	691,120
Pearl River	441,505
Perry	222,670
Pike	882,671
Pontotoc	160,963
Prentiss	164,586
Quitman	374,615
Rankin	227,608
Scott	312,705
Sharkey	439,263
Simpson	232,569
Smith	143,400
Stone	105,394
Sunflower	1,147,532
Tallahatchie	753,333
Tate	531,812
Tippah	237,221
Tishomingo	52,199
Tunica	525,426
Union	178,197
Walthall	430,571
Warren	1,088,275
Washington	2,409,970
Wayne	471,160
Webster	156,604
Wilkinson	347,762
Winston	448,790
Yalobusha	204,333
Yazoo	1,014,543
All State	96,450
ADC Fraud Collections	(22,192)
GRAND TOTAL	$48,874,394

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MADDOX

SNYDER

GULIANI

Dr. Maddox is an Assistant Professor of Marketing at the University of Missouri—St. Louis. He received his B.A., M.B.A. and Ph.D. from the Ohio State University. He is actively pursuing research in the areas of consumer satisfaction, retail store patronage and measure validation.

Ronald L. Snyder (B.S. Industrial Management, Franklin University, 1970; M.B.A., New York Institute of Technology, 1975;) has worked in industrial engineering, marketing and project management areas and is currently the Manager of Industrial Engineering at Cordis Corporation, a leading manufacturer of cardiac pacing devices and catheters.

Harinder S. Guliani (B.S. Industrial Engineering, Punjab University, India, 1969; M.S. Industrial and Systems Engineering, Ohio University, 1970;) has worked as a senior industrial engineer at Amerace Corporation and is currently the Manager of Industrial Engineering at Cordis-Dow, a leading supplier of artificial kidneys and dialysis supplies and equipment.

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Customer Satisfaction and the Bottom Line

Dr. R. Neil Maddox

Sales, market share and profits have traditionally been taken as indicators of the level of consumer satisfaction. Recently, marketers have expressed interest in more direct, subjective assessments. Academicians, regulators, and practitioners have argued that measures of this sort ought to be developed. In spite of the flurry of conferences, articles, and models, one thing seems lacking: empirical evidence that these researchers are measuring anything of immediate importance to the manager (1, 2, 3, 9).

Studies of consumer satisfaction have been prompted by a variety of motives. Two perspectives, the humanistic and the managerial, will serve to illustrate the diversity of viewpoints. According to those motivated by **humanistic** concerns, people simply **ought** to be satisfied with their goods and services. Satisfying consumers is a worthy goal, in and of itself. Creating customer satisfaction is numbered among management's social responsibilities.

The **managerial** view reflects the marketing concept, the notion that the key to profitability is satisfying consumer needs. The level of satisfaction should be monitored because it is directly related to sales, market share and profit (6). Satisfying customers is in the manager's own self-interest.

Are more satisfied consumers more loyal? More profitable? Should management monitor and attempt to affect the level of customer satisfaction? One intuitively answers "yes" to both questions. Marketers have been conditioned to accept these notions. Yet, if we were to search for support, our faith might be shaken. There is little empirical evidence bearing on the relationship between measures of satisfaction and variables of more direct interest to management. Examination of a closely related concept, job satisfaction, might further undermine our confidence. Industrial psychologists have repeatedly failed to show that more satisfied workers are more productive (8).

Studies of the effects of satisfaction on outcomes of professional interest to managers are needed. The relationship between customer satisfaction and store loyalty is explored in the following paragraphs.

Hypotheses

Consider the assumption that more satisfied customers will shop at their store more frequently than those who are less satisfied. But, **frequency** of trips to one's own store and its competitors is most strongly influenced by factors other than mere satisfaction, including family size and composition, wife's employment, home food storage capacity and proximity of stores to home and workplace.

A more realistic expectation is that satisfaction affects the **distribution** of trips among stores. More satisfied customers should be expected to make a greater proportion of their visits to their own store than those who are less satisfied; they should be more loyal.

These considerations are reflected in the hypotheses tested in this study.

HI There will be no difference between more and less satisfied customers in the **frequency** of trips to their own supermarket and to other supermarkets.

H2 Those who are more satisfied with their regular supermarket will give it a greater **share** of their patronage than those who are less satisfied.

The Study

Data were gathered in the St. Louis SMSA during Summer, 1976 and Winter, 1978 by students in consumer behavior classes at the University of Missouri—St. Louis. Respondents were 761 adult, nonstudent females who regularly shop for their households. Respondent characteristics are summarized in Table 1. Only those who gave complete data on the questions outlined below were included in the analysis.

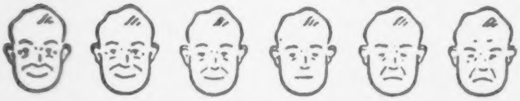
TABLE 1

Demographic Characteristics of Respondents

	Total Respondents [n=761]
Age	
Under 24	23.8%
24-34	26.6
35-49	30.7
50+	14.3
NR	4.5
Ethnic Background	
Black	9.9
Caucasian	80.2
Other	6.0
NR	3.9
Marital Status	
Never Married	15.1
Married	70.4
Divorced/Separated/Widowed	13.8
NR	0.8
Education	
Elementary	7.4
High School	38.2
Some College	48.2
NR	6.2
Employment Outside Home	
Yes	58.9
No	23.0
NR	18.1
Family Income	
Under $10,000	16.2
$10,000-15,000	20.3
$15,000+	56.5
NR	7.0

Measures

Data were collected with a self-administered questionnaire. Respondents first named the store where they did most of their grocery shopping and recorded their satisfaction with this store on a six-point faces scale. The faces were given an interval scoring with six corresponding to the most favorable rating. They were then asked to report on several aspects of their shopping behavior including the frequency with which they shopped at a) their own store and b) other stores.



Analysis and Results

The mean overall satisfaction level was 4.40. Respondents were divided into more and less satisfied halves according to their score on this item. The mean satisfaction level for the more satisfied group was 5.36; for the less satisfied half the mean was 4.40.

A loyalty score was computed for each shopper. This was the ratio of the number of trips (per week) to her own store to the total number of supermarket trips.

$$\text{Loyalty} = 100\text{x} \; \frac{\text{Trips to Own Store}}{\text{Total Supermarket Trips}}$$

Difference between the two satisfaction groups on the frequency measures and the loyalty index were tested using the t-test. The findings are summarized in Table 2.

TABLE 2

SHOPPING FREQUENCIES AND LOYALTY OF MORE AND LESS SATISFIED CUSTOMERS

	More Satisfied	Less Satisfied	Difference
Trips per Week to Own Store	1.5	1.4	0.1*
Trips per Week to Other Supermarkets	0.7	0.8	0.1*
Total Trips	2.2	2.2	0.0
Loyalty	69.2%	64.9%	4.3%**

*Not Significant
**$p \leq .005$

The hypotheses are accepted. The difference between the groups on the loyalty index is highly significant ($p \leq .004$). Only minor differences were found on the shopping frequency measures.

With one minor exception, loyalty was monotonically related to satisfaction. A high loyalty score associated with a satisfaction score of two was bothersome, contradicting both common sense and the major hypothesis of the study. These few (n=24) respondents are ill satisfied with their store, yet, give it a far greater share of their patronage than any other group.

Other information from the study may explain this anomaly. When compared to all other respondents, those with a satisfaction level of two rate their store significantly higher on "convenience of location" ($p \leq .02$) and "prestige" ($p \leq .03$) and lower on "adequacy of product guaranty" ($p \leq .01$). They also indicated location to be more important in their choice of stores ($p \leq .07$). Their ill feelings may reflect one or more failures of the prestigious store (55% shop at a chain with a strong upscale image) to stand behind its merchandise. Proximity to this store coupled with the importance they attach to location may, psychologically, constrain them to shopping in a market they would avoid if another were equally available.

Implications

Is this finding meaningful? Even though a statistically significant difference in loyalty has been shown, is it large enough to be of practical significance? Let's suppose a manager were to raise his customers' satisfaction level enough to move them from the lower half to the upper half, and that he enjoyed the corresponding 4.3% increase in loyalty. What effect would this have on sales and profits?

Expenditure data were not collected from respondents in the study. However, the possible magnitude of the outcomes can be illustrated by combining the findings reported above with data taken from industry reports.[1] We will assume the perspective of a medium sized ($2-4 million sales) chain store serving an average customer population. The major assumption is that consumers' purchases are distributed evenly over trips to their own stores and other markets.

Our hypothetical supermarket serves 3800 "regular" customers spending an average of $7.60 on each of their 2.2 weekly shopping trips. In total, these shoppers spend $3,303,873 (3800 X $7.60 X 2.2 X 52) per year in some grocery store. Were they typical of the less satisfied half or the sample, $2,144,213 (64.9%) of this amount would be spent at their regular store. If their satisfaction level could be raised to that of the more satisfied half, and if this were accompanied by a commensurate increase in loyalty (4.3%), this amount would grow to $2,286,279: an increase of $142,066. If this could be achieved without increasing fixed (overhead and administrative) costs, an average store with a gross margin of 21.35% would enjoy an addition to profits before taxes of $30,331. This is certainly an attractive possibility in an industry where net profit after taxes (0.66%) is approximately equal to cash discounts earned (0.64%).

It is recognized that the actual profit implications are entirely dependent upon costs of raising customer satisfaction levels. If it is necessary to "give away the farm," it would not be worthwhile. It could be more profitable to let satisfaction and loyalty fall where they may and either a) attract more customers or b) adopt other patronage building devices. These alternatives are worthy of consideration, but there are serious shortcomings.

First, with a leveling population and marketplaces nearly saturated with supermarkets, there are few "free" customers; they must be won away from a competitor. Other findings from this study indicate the factors most important to satisfaction are similar to those commonly associated with winning customers: employee attitudes, quality and quantity of goods, store apperance, etc. (7). **The strongest single determinant was friendly, helpful employees.** Satisfying present customers and attracting new customers are not mutually exclusive alternatives.

Patronage building devices have been widely tried. Many stores are finding trading stamps too costly. Games and similar promotions fell into disrepute after they were a focal point of the revolt of dissatisfied housewives during the mid 60's. Less contrived approaches to increasing loyalty seem warranted. Satisfying, rather than entertaining, customers capitalizes upon the unique skills and abilities of the merchant and his organization.

Conclusion

This article may seem only to have proven the obvious; more satisfied customers give their store a greater share of their patronage than less satisfied customers. Given the multiplicity of factors influencing shopping behavior, this was **not** a foregone conclusion. In fact, the highest scores on the loyalty index were for a few shoppers for whom convenience seemed to dominate all other considerations.

It has been demonstrated that the measured level of customer satisfaction is related to store loyalty and, by implication, sales and profits. Granted, in a stable market situation, even these gains can only be made at the direct expense of another store and competitive gains of this sort can be costly. Fortunately, it does not seem that the factors involved, such as emphasizing friendly, helpful service, require large or radically different sorts of expenditures. As one might expect, satisfaction is most dependent upon good, sound, customer-oriented marketing.

Footnotes

[1] Aggregate performance data and expenditure data are from **Progressive Grocer's** annual report and the author's calculations (3).

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INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	May 1980	April 1980	May 1979
Retail Sales	165.4	192.6	190.4
Electric Sales	198.9	206.7	200.1
Telephones in Service	223.6	224.3	214.4
Gasoline Gallonage	148.5	139.4	140.5
Loans of Savings & Loan Institutions	65.8	155.6	247.6

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Canton	
Levi Strauss & Co.	500
Jeans Distribution Center	
EXPANDED	
Meridian	
Peavy Electronics	
Sound and Studio Equipment	

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Instructions for Submitting Articles

Articles submitted for consideration for publication should be related to any subject in Business and Economics. It may be a presentation of results of a study by the author, a well supported opinion on a current topic or an application of some theoretical aspect of business or economics that might be applicable to the businessman. The article should be well supported, and should avoid an overly technical presentation. The article should be 12-18 double-spaced, typewritten pages in English. Graphs, mathematical and quantitative data, charts, and tables are acceptable. Authors should submit 2 copies of each manuscript plus a vita sheet and a photograph. Upon publication, 6 complimentary copies of the journal are sent to the authors, with additional copies available upon request. Manuscripts to be considered for publication should be sent to: Dr. Guy T. Peden, Jr., Editor, MISSISSIPPI BUSINESS REVIEW, P. O. Box 5288, Mississippi State, MS 39762.

Applying P.E.R.T. To Increase Productivity in Nonrepetitive Activities

By
Ronald L. Snyder
and
Harinder S. Guliani

Our economy is entangled in hyperinflation, while the productivity indices denote and depict very low levels of increasing output. In fact, the low levels of increasing productivity are unacceptable. As an industrial society, we must devise new techniques and must apply existing techniques in new areas to increase productivity.

At the individual corporate level, we can classify tasks as being repetitive or nonrepetitive. The repetitive tasks are routine in nature, and these activities are bounded by formal, written operating procedures or by informal, unwritten operating procedures. Without tackling the quality of work life issues, classical industrial engineering techniques can be applied to streamline activities and to increase output.

But, what about nonrepetitive activities? These types of activities are classified under the broad, general headline of project or program management and are considerably more complex and dynamic and, to a certain extent, may appear even confounding. Some would even argue that nonrepetitive situations are so complex that one could not apply effective planning techniques to achieve the desired results. We believe that applying planning techniques, no matter how chaotic the situation, will result in a more effective and efficient method—thereby ensuring that the invested resources will be much more productive. Remember that any plan is better than no plan!

Many diverse planning and scheduling techniques exist, but one of the better known is P.E.R.T. (Program Evaluation and Review Technique). The concept was originally devised in 1958 for the Polaris missile development by the Program Evaluation Branch of the Special Projects Office of the U.S. Navy will help from the Lockheed Missile Systems Division and the consulting firm of Booz, Allen and Hamilton. Variations of P.E.R.T. exist in the form of P.E.R.T./Cost, G.E.R.T. time-based scheduling and many others which may be a modification to suit a particular business. The impact of applying P.E.R.T. will be: To eliminate the waste of project time and money; to organize a project from beginning to end; to create an integrative climate of cooperation and communication; and to spot potential problems before they become crises.

A brief overview of P.E.R.T. is described as follows: P.E.R.T. is a linking network approach utilizing events and activities. Activities consume resources and time, while events are specific points of time. The network consists of circles to denote events and arrows to denote activities. The actual network can be created manually or by a computer-controlled plotter. The general conventions are: (1) All events must be numbered; (2) The same number cannot be used for more than one event; (3) All events must be larger than the predecessor; and (4) The start and the end of the project should be identified by events, and these should also be numbered. The last two conventions are normally required for a computerized approach to facilitate computations and enable unique identification.

To illustrate the fundamental ideas which we have discussed so far, there is listed below in Chart 1 a series of activities in the development of an artificial kidney; and Figure 1 is the actual network. The activity symbol is labelled on the line segment and indicates time required. The events are labelled within the circles.

CHART 1

ARTIFICIAL KIDNEY PROJECT
OVER-ALL PLAN

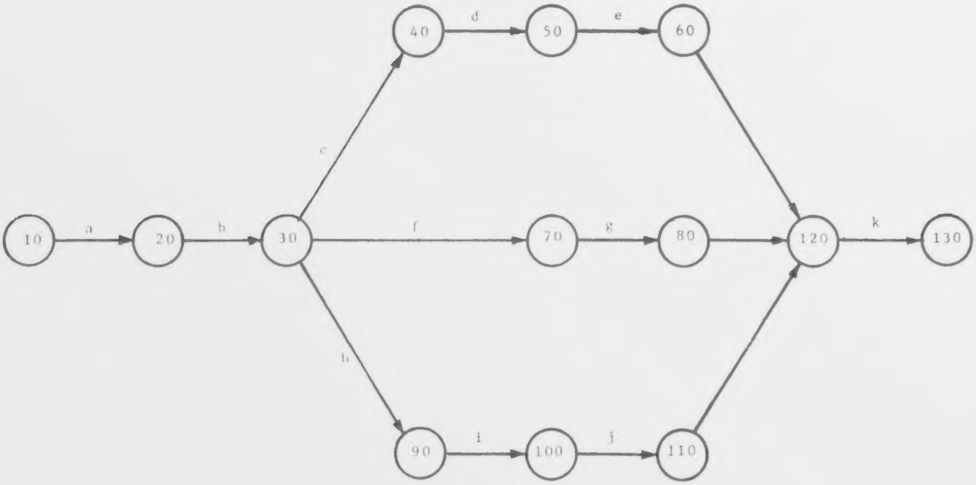
Activity Symbol	Events	Description
a	10-20	Start Research and Development Work
b	20-30	Complete Prototype Drawings
c	30-40	Complete Test Prototypes for Market
d	40-50	Market Test Initial Approval

(Chart 1 Continued)

e	50-60	Shelf Life Test Approval
f	60-70	Package Design
g	70-80	Test Package
h	80-90	Quality Control Test Approval
i	90-100	Quality Control Final Test Report
j	100-110	F.D.A. Approval
k	120-130	Complete Market and Commercialization Final Acceptance

FIGURE 1

ARTIFICIAL KIDNEY PROJECT
GRAPHIC PRESENTATION OF OVER-ALL PLAN



The amount of the activities to be included in a network would depend on the complexity of the project. For many projects that involve thousands of activities, it would be impossible to represent all of the activities on one network. They are shown in a series of networks. For a complex project, there may be a network for major items and a series of networks for the series of items. The president of a corporation may not be interested in the detailed department activities of a network but may want to see the complete picture on the product's completion data and intermediate stages. In fact, each of the activities for developing the artificial kidney project would require a separate network.

After creating the major activities and events, as in case of the artificial kidney project, the next series of steps in developing a complete P.E.R.T. network is to identify the earliest expected date, latest allowable date, slack, critical path and estimating time.

Estimating the time required to complete each activity is the first step in identifying the critical path. Generally, time estimates are given in seven-day calendar weeks where each week is assumed to be a five-day, forty-hour work week. Furthermore, in P.E.R.T., three estimates of time are made for each activity. They are the:

1. **Optimistic Time** - The minimum possible period of time in which the activity can be accomplished;
2. **Most Likely Time**—The best estimate of the period of time in which the activity can be accomplished; and
3. **Pessimistic Time**—The maximum possible period of time it would take to accomplish the activity.

The next step consists of utilizing a formula to calculate the mean or expected time. The main idea is to identify those activities which ultimately dictate the completion time of the whole project. The mean or expected time, te represents the mid-point of possible completion time and is calculated by the following formula:

$$t_e = \frac{t_o + 4t_m + t_p}{6}$$

Where te - Expected Time
to - Optimistic Estimate
tm - Most Likely Estimate
tp - Pessimistic Estimate

After calculating the expected time for each activity, the next step is to group activities, as shown in Chart 2. For example, between events 10 and 20, the optimistic time, most likely time and pessimistic time are 10, 12 and 14 weeks respectively. When using the above formula, the calculated expected time is 12 weeks. All three estimates and the expected time are depicted graphically in Figure 2.

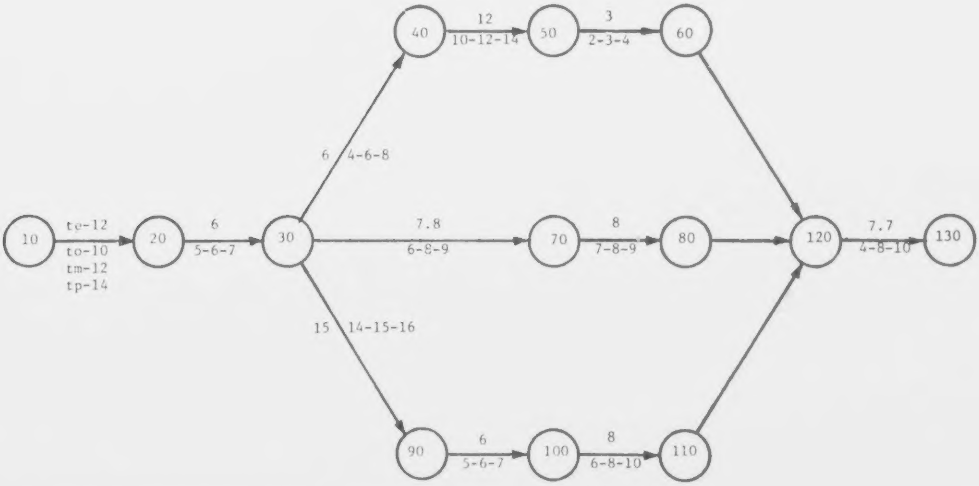
CHART 2

ARTIFICIAL KIDNEY PROJECT GROUPING ACTIVITIES

Group I - Activities a, b, c, d, e, and k
Group II - Activities a, b, f, g, and k
Group III - Activities a, b, h, i, j, and k

FIGURE 2

ESTIMATES AND EXPECTED TIME ELEMENTS

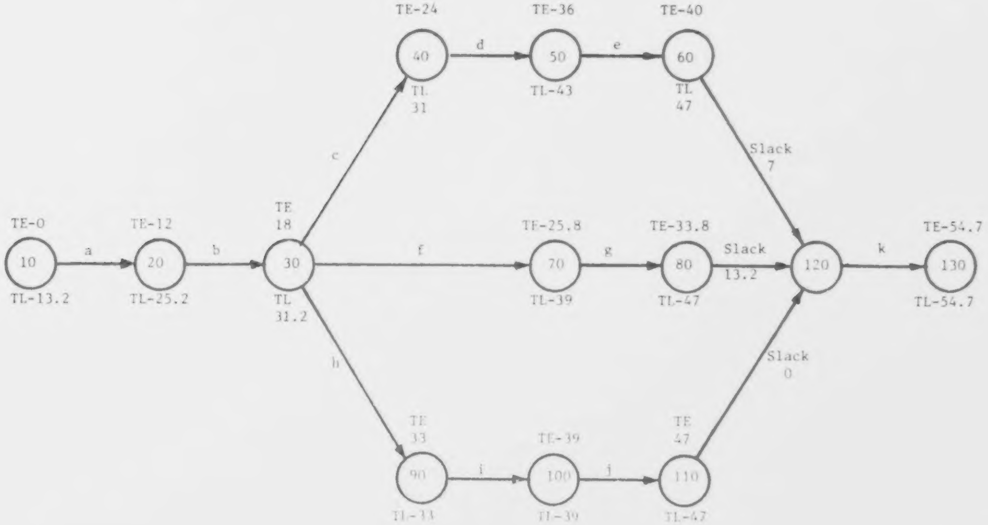


The object, in this instance, is to determine which of these three groups will take the longest time to complete the project. The group which takes the **longest time is said to be on the critical path**. Any delay in any activity which lies on the critical path will delay the entire project. The difference in time required to complete a group of activities on the critical path and a group of activities which does not lie on the critical path is called the slack time. This term appropriately conveys the idea that a delay in a group of activities which does not lie on the critical path can be tolerated so long as the delay does not cause the completion time to exceed the completion time for the group on the critical path.

More detailed computations have to be performed to arrive at the earliest expected dates, latest allowable dates and slack time, but this type of work can be handled expeditiously by a computer program or manually. Probability theory and other quantitative tools, such as linear programming, are powerful aids in adding to the sophistication of developing more precise P.E.R.T. networks. There are many reference materials available for a more detailed review of actual P.E.R.T. construction, and some of these are

FIGURE 3

EARLIEST, LATEST, SLACK AND TOTAL TIME



listed in the bibliography.

The final result is shown in Figure 3 which indicates that the critical path for the artificial kidney project is Group III; Activities a, b, h, i, j, and k, which is 54.7 weeks. The total time for Group I activities and Group II activities is 46.7 weeks and 41.5 weeks respectively.In Figure 3, te is the earliest expected date; tl is the latest allowable date; and slack is likewise denoted.

After identifying the critical path, management can monitor and measure the progress of a specific project and reallocate resources as required to ensure meeting the target finish date. Some benefits caused by a company's measurement attitude are: (1) A comparison can be made with other organizations within a company in terms of performance, experience and norms; (2) measurement tends to improve performance by motivating the company's management and workers after setting goals based on the measurement; (3) measurement enables companies to make decisions about alternative methods or procedures; (4) measurement creates competitive action; and (5) productivity measurement enables an effective planning of a company's resources.

A general definition of productivity is the measure of how well resources are brought together in organizations and utilized for accomplishing a set of results. Productivity is achieving the highest level of performance with the least expenditure of resources. The key concepts for productivity are performance, activities and utilizing resources. P.E.R.T. approaches utilize these ideas, and the technique can be a most worthwhile aid and tool in decision making. P.E.R.T. can be an effective amplifier of managerial skills.

Although network analysis is an excellent tool for communication, coordination, planning and scheduling for nonrepetitive activities, it is not the solution to all of management problems. It is not a substitute for the manager's knowledge, intelligence, experience and judgment. However, network analysis does provide management with updated information necessary for reaching decisions in project management and in increasing productivity.

(Bibliography on Page 13)

The Dean's Corner

With the first withering blasts of a baneful recession now striking fear into the hearts of all whose jobs and economic existence are at stake, one wonders how many New York cities, Lockheeds and Chryslers loom ahead. And, one wonders what the long-range implications of these "bailouts" by the Federal government might be, as well as how, with equity, other such cases can be refused.

New York City consistently lived beyond its means, paying more than generous salaries to its "public servants," charged little for tuition in its massive university system (while paying higher teacher salaries than average) and in general acted like a profligate ne'er-do-well who expects to live beyond his means at the expense of the rest of society. After displaying complete fiscal irresponsibility and finding itself unable to pay its bills, New York expected the taxpayers in other area (you) to effect a "rescue." A number of other cities are acting in a similar irresponsible manner.

Poor management policies, a demanding labor union, along with poor products were responsible for Chrysler's problems. At a time when its sales were lagging and the company's vehicles were being rated poorly in terms of maintenance problems and when it was operating in the red, management appeared to put up little or no resistance to the United Auto Workers wage and fringe benefits demands. These were clearly in excess of the president's guide lines, when the workers were already receiving far above normal wages. In fact, this so-called bargaining occurred during the very time that Chrysler was seeking the "bailout." Mind you there was no increase in productivity to justify the sizeable increases.

The following appeared in the May 23 issue of the **Wall Street Journal:** "Aluminum workers; new three-year contracts with major producers could make the workers the highest paid in the country's industrial sector. Assuming an 11 percent annual inflation rate, the average employee's pay would rise 42% over the life of the pact." Nothing has been reported relative to any increase in productivity. It would have been bad enough if the percentage increase had been 13% annually (the rate of inflation), since this would have contributed heavily to inflation, but, no—42%, and in only three years. Was this won after management's refusal to succumb to this sort of extortion and after months of strike? No. If there were any genuine resistance to these demands, little has appeared in the news media. What is happening in these instances of excess wage settlements is that management is simply passing the burden on to consumers with impunity, and those who do not belong to monopolistic unions are having their living standards reduced in favor of bloated and overpaid union workers in many cases. The steel industry is another good example of this irresponsibility on the part of management and a cowardly congress which refuses to clip the wings of high-flying and arrogant unions. For the moment aluminum is not seeking a rescue but steel is, and has been for some time via the "trigger" price mechanism, which prevents competition from outside and entrenches the industry in its excesses. This, too, is a form of "bailout," since the government is punishing most of us in favor of a few well organized "voters."

It seems sufficiently forboding to have any army of bureaucratic leeches siphoning off the life blood of society, especially when the millions of able bodies dole recipients are added to the list. But now the government seems to be inclined through one device or another to add entire industrial or municipal giants to this group of blood suckers. A further example of how the rest of society is being bled in favor of a few is the case of automobile workers by the thousands who are being laid off because their excessive wages have caused automobiles to be overpriced—and yet who will continue to receive 80% of their normal (or abnormal) wages for one year while doing nothing. How many non-union workers and other contributors to the economy can hope for such benevolence?

Now, in addition to the above inequities, the real problem is, what is happening to the stock holders in these poorly managed industries? Certainly, they are not being enrichened, those whose life savings buy the equipment to provide the jobs, **et cetera.** A quick sampling of yields on steel stock show these to be less than the return on FDIC or FSLIC insured money market CD's. And yet the degree of risk is not even comparable. Is it any wonder that of new capital funds raised last year, 90 percent was from the sale of bonds. Of course, the ill designed corporate tax structure almost mandates corporate indebtedness. So far as the stockholders of Chrysler are concerned, their reward is zilch, while the union workers are being heavily compensated even when idle. All of this does not enhance the future of capitalism. What will happen when the investors, small and large, (including the trust funds in which salaried workers place their retirement savigns via pension plans, **et cetera**) refuse to assume the risk of ownership? The answer is, of course, that since someone must do this, and if private citizens refuse, the government will have to do so. And when this happens we shall have entered into the realm of socialism, "via the back door"—just as England has already done. When this occurs who will be the real culprits? The government itself, through actions of the "Fair" Labor Standards Board and a "weak livered" congress along with an irresolute mangement will be the guilty parties. Guilty by virtue of the fact that nothing was done to check the raw power of the unions.

With respect to the ill-advised tax policies of the government, which in effect mandate corporate debt, the ground is being prepared for countless potential "bailout" candidates. With the corporate income tax rate of nearly fifty cents on the dollar, corporations naturally lean toward borrowed capital rather than trying to sell stock. Corporations are independent entities in the eyes of the law, and they "rent" funds with which to operate and buy equipment and other capital goods. In a sense, it is immaterial to them whether the rental is termed "dividends" (stock and retained earnings) or "interest" (bonds). However, it makes a great difference in terms of net income after taxes, because if the rental is called "interest," it is tax exempt. The nearly fifty cents on the dollar saved in many instances makes it possible for the business to survive. However, interest payments are mandatory while dividend payments are optional in the short run, at least. This is not true in the long run, however, since skipping dividends without a commensurate growth in equity value could be disastrous in terms of future financing. But since interest is mandatory, an extended recession may cause countless defaults with either a closing down of the business or at least some sort of reorganizational retrenchment. This, in turn, leads to a loss of jobs for thousands of workers—unless, there is to be a government "bailout" in future cases of this sort.

We are inclined to forget the treat trauma associated with the loss of a job for even one person, especially when this is through no fault of his own. This is even more of aproblem today with inflation-bloated payments of all kinds coming due each month. It often leads to the loss of the worker's home with its associated hard-earned equity. Other losses also freqently accompany unemployment. In short, the loss of a job by a responsible person is nothign short of a horrible nightmare. When this is multiplied by the hundreds of thousands or even millions who suffer this catastrophe with every recession the magnitude of the problem becomes extremely great. This should not be necessary with the alleged progress we have made, and unless this is discontinued capitalism is doomed and rightfully so. Moreover, these unemployed no longer have the purchasing power to buy the products and service being produced, and so the problem feeds on itself and becomes ever greater, like a snowball rolling downhill. Certainly, we should not put up with a tax structure which worsens the problem instead of aiding in its solution. The mandating of corporate indebtedness does this. Both in terms of preventing the trauma of massive unemployment and to keep the economy viable, the temptation for a government bailout becomes even greater.

Another reason for the increase in the potential need for future "bailouts" is our dismal experience in terms of productivity. Essentially all leading nations are outperforming the United States in this extremely important factor. We are actually experiencing a decline in productivity. To the extent that certain industries and firms are below average, their chances of failure will clearly become greater. To some extent this decline in productivity is also explained by our tax structure. Gains in productivity result from savings which are then available for investment in improved production facilities. Our tax structure does nothing to encourage saving and if anything actually encourages spending. Excess spending with the corresponding lack of saving is the partial explanation for our present wild inflation and "banana republic"—type interest rates. Take the family which drives old automobiles, spends little on travel and entertainment and in general sacrifices to put aside savings for a rainy day, for retirement or for any reason. The interest earned on these savings is heavily taxes, destroying much of the incentive to save. On the other hand the profligate who stays in debt up to his ear lobes, and rushes down to finance a car with each new model, is able to deduct the interest he pays from his taxes. His excess spending contributes to inflation and his borrowing tends to drive interest rates up. Just as the corporate income tax encourages the raising of funds through debt as opposed to equity, the personal income tax tends to encourage borrowing rather than saving. Both can have an adverse effect upon the economy, and eventually lead to the need for even more "bailouts" by the government.

The entire concept of free enterprise is predicated upon competition and the survival of the efficient. A continued cluttering of the market with poorly managed companies with an overpaid work force supported in one fashion or another by the government will inevitably drain the economy of much of its vitality. Certainly it will do nothing to raise living standards by the continuous drive to reduce costs by improving efficiency. And if the number of bailouts increase, the strings tied to bailouts by the government (and probably rightfully so) will move the government further along toward either the control or ownership of business. It seems that the only hope is for a sounder tax structure, a more widespread dissemination of wage settlements (to better inform the public of what is happening) and a better reporting of poor management. Rarely are the full terms published in union contract settlements, and there appears to be a news media bias in favor of unions. Perhaps a clear warning that a docile surrender to unreal wage and fringe benefits demands will not be rewarded by a public bailout along with a better airing of settlements will cause management to be somewhat less inclined to roll over and play dead, and thusly reduce the need for bailouts.

Democracy, free enterprise and all the values which made this nation great suffer when the role of government increases. And when we reach the point that business firms cannot manage without the aid of government, free enterprise will suffer the same fate as the small family farm. But instead of being replaced by large or corporate farms as has been the case with small farmers, free enterprise will be replaced by socialism, facism or some new kind of "ism" which few of us will like. As the famous philosopher, psychologist and family counselor, Ann Landers, so frequently states, "it is time to wake up and smell the coffee." It should hastily be added that the writer of this column **has heard said** that this is what Miss Landers often says.

—Gaines M. Rogers, Dean

(Continued from Page 10)

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Help-wanted Advertising Index

The Conference Board's Help-wanted Advertising Index fell again in May for the sixth month in a row.

At 112 (1967 = 100), the seasonally-adjusted Index stands ten points below the April level of 122 and 42 points below the year-ago figure of 154.

Since October 1979, want-ad volume fell 32.8% nationally, and all nine regions measured registered sizable drops during this six-month period. The steepest declines were in the Mountain region (44.3%), the West North Central (41.5%) and the East North Central (40.9%). Lesser declines were recorded in the East South Central (33.1%), the South Atlantic (32%), the Pacific region (30.6%), the West South Central (27.3%), the New England region (24.2%), and the Middle Atlantic region (23.3%).

Says Kenneth Goldstein, associate economist in the Board's Business Conditions Analysis Department: "The drop in help-wanted advertising volume thus far in the recession exceeds the decline over a similar period in the last recession. The severity of the drop is most pronounced in the industrial Midwest and the high-growth Southern and Western regions.

"While labor market conditions have been very heavily affected by the recession and additional lay-offs can be expected to continue for the remainder of the year, the rate at which they are announced will soon slow down."

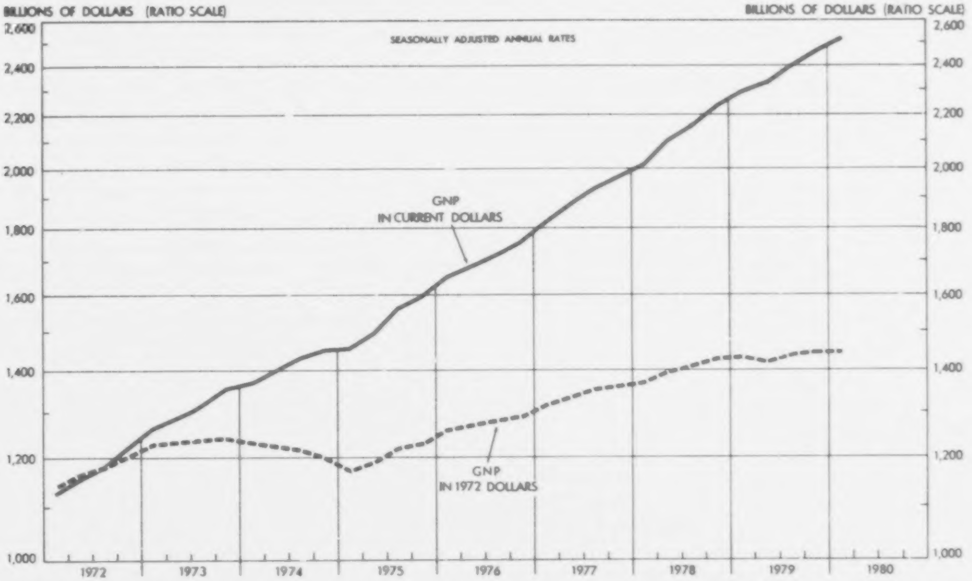
The Help-wanted Index measures the volume of classified advertising in 51 major newspapers across the nation. It is sensitive to changes in the demand for labor, as well as general business conditions.

Source: May, 1980, **The Conference Board Help-wanted Advertising Index.**

TOTAL OUTPUT, INCOME, AND SPENDING

GROSS NATIONAL PRODUCT

According to revised estimates for the first quarter, gross national product rose $59.2 billion or 10.0 percent, both at annual rates. Real output (GNP adjusted for price changes) rose 0.6 percent from the fourth quarter level and the implicit price deflator rose at a 9.3 percent annual rate.



SOURCE: DEPARTMENT OF COMMERCE

COUNCIL OF ECONOMIC ADVISERS

[Billions of current dollars; quarterly data at seasonally adjusted annual rates]

Period	Gross national product	Personal consumption expenditures	Gross private domestic investment	Exports and imports of goods and services			Government purchases of goods and services					Final sales
				Net exports	Exports	Imports	Total	Federal			State and local	
								Total	National defense [1]	Nondefense		
1969	935. 5	579. 7	146. 2	1. 8	54. 7	52. 9	207. 9	97. 5	76. 3	21. 2	110. 4	926. 2
1970	982. 4	618. 8	140. 8	3. 9	62. 5	58. 5	218. 9	95. 6	73. 5	22. 1	123. 2	978. 6
1971	1, 063. 4	668. 2	160. 0	1. 6	65. 6	64. 0	233. 7	96. 2	70. 2	26. 0	137. 5	1, 057. 1
1972	1, 171. 1	733. 0	188. 3	−3. 3	72. 7	75. 9	253. 1	102. 1	73. 5	28. 6	151. 0	1, 161. 7
1973	1, 306. 6	809. 9	220. 0	7. 1	101. 6	94. 4	269. 5	102. 2	73. 5	28. 7	167. 3	1, 288. 6
1974	1, 412. 9	889. 6	214. 6	6. 0	137. 9	131. 9	302. 7	111. 1	77. 0	34. 1	191. 5	1, 404. 0
1975	1, 528. 8	979. 1	190. 9	20. 4	147. 3	126. 9	338. 4	123. 1	83. 7	39. 4	215. 4	1, 539. 6
1976	1, 702. 2	1, 089. 9	243. 0	8. 0	163. 3	155. 4	361. 3	129. 7	86. 4	43. 3	231. 6	1, 692. 1
1977	1, 899. 5	1, 210. 0	303. 3	−9. 9	175. 9	185. 8	396. 2	144. 4	93. 7	50. 6	251. 8	1, 877. 6
1978	2, 127. 6	1, 350. 8	351. 5	−10. 3	207. 2	217. 5	435. 6	152. 6	99. 0	53. 6	283. 0	2, 105. 2
1979	2, 368. 8	1, 509. 8	387. 2	−4. 6	257. 5	262. 1	476. 4	166. 6	108. 3	58. 4	309. 8	2, 350. 6
1978: III	2, 159. 6	1, 369. 3	356. 2	−6. 8	213. 8	220. 6	440. 9	152. 3	99. 0	53. 3	288. 6	2, 139. 5
IV	2, 235. 2	1, 415. 4	370. 5	−4. 5	224. 9	229. 4	453. 8	159. 0	101. 2	57. 8	294. 8	2, 214. 5
1979: I	2, 292. 1	1, 454. 2	373. 8	4. 0	238. 5	234. 4	460. 1	163. 6	103. 4	60. 2	296. 5	2, 272. 9
II	2, 329. 8	1, 475. 9	395. 4	−8. 1	243. 7	251. 9	466. 6	161. 7	106. 0	55. 7	304. 9	2, 296. 4
III	2, 396. 5	1, 528. 6	392. 3	−2. 3	267. 3	269. 5	477. 8	162. 9	109. 0	53. 9	314. 9	2, 381. 9
IV	2, 456. 9	1, 580. 4	387. 2	−11. 9	280. 4	292. 4	501. 2	178. 4	114. 6	63. 8	322. 8	2, 451. 4
1980: I p	2, 516. 1	1, 628. 7	384. 0	−14. 0	304. 2	318. 2	517. 4	186. 2	119. 6	66. 6	331. 2	2, 516. 0

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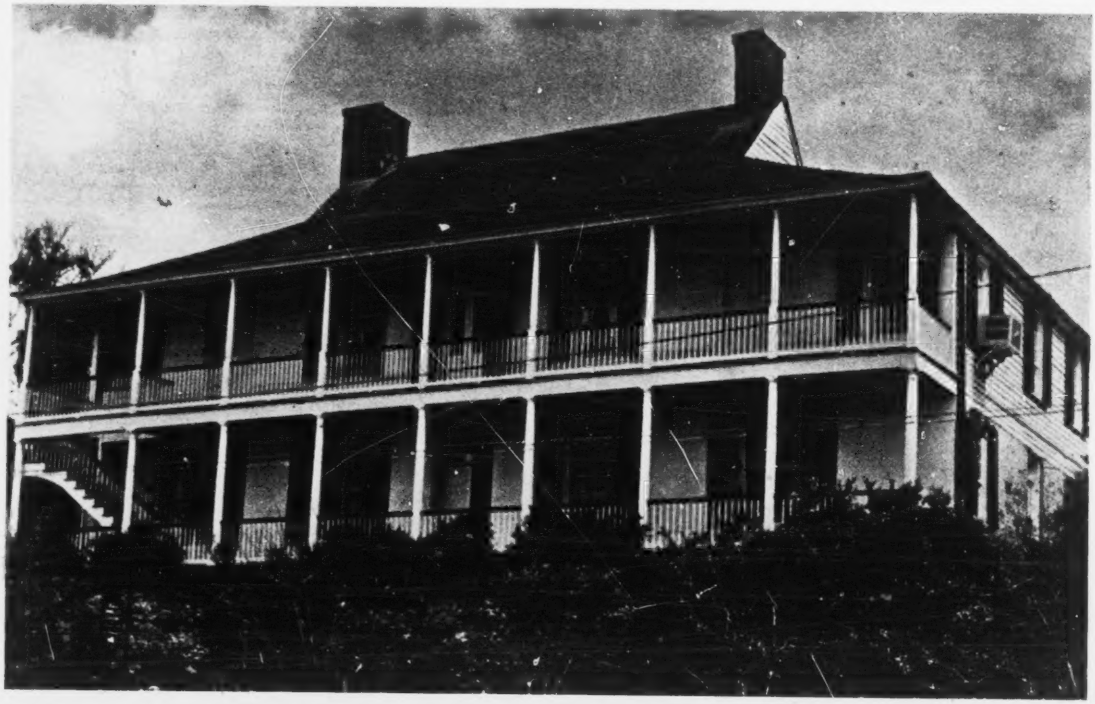
[1] This category corresponds closely with budget outlays for national defense, shown on p. [illegible].

Source: Department of Commerce, Bureau of Economic Analysis.

Tourist Briefs

Connelly's Tavern

Natchez, Mississippi



The house built on Ellicott's Hill was one of the first structures to be built after the Spanish laid out a new town on the Natchez bluff. The house was then built and owned, in 1797, by James Moore, a merchant. Although Natchez was a frontier outpost at the time, it was also the first capital of the Mississippi Territory after 1798. The best available craftsmen worked on the house and favorably influenced the architectural tastes of a vast, developing area.

The style of the Moore house came from Louisiana. There are no halls and each room in the house opens directly outdoors. There are two stories, the lower being of brick, and a very plain interior treatment. The upper, being wood-framed and clapboarded, has well-detailed wood mantels, cornices, and door trim. The central room facing the river has a domical recess in the ceiling for hanging a chandelier. The surrounding rooms have slightly vaulted ceilings. The steep bluff site faces the Mississippi River. The two-story gallery on the river side is high above Canal street while the upper story is at grade level at the rear where it is reached by bridges across a dry moat.

The south end of the house rests on the original lot boundary, and it has been speculated that the south rooms were added after the adjacent property came under the same ownership in 1851.

At the time of the restoration, 1935-36, it was believed that this was Connelly's Tavern, an establishment of importance in the history and legend of Natchez.

Source: Mississippi Department of Archives and History

MEET THE FACULTY

DR. ROBERT L. FRNKA

Division of Business Research

Dr. Robert L. Frnka is an Associate Economist with the Division of Business Research and an Associate Professor of Economics in the College of Business and industry. Upon joining the Faculty of Mississippi State University in 1975, one of his major responsibilities in the Division of Research is contract research; which entails writing proposals and compiling the research contracts. In addition he edits two of the Division's publications, the MISSISSIPPI PERSONAL INCOME and the MISSISSIPPI EMPLOYMENT. The areas of research that he has worked on are Economic Feasibility Studies on Outdoor Recreation and Water Resources. He has taught economic principles, real estate, and business policy. His teaching and research areas of interest have been monetary economics and econometrics.

His preparation for a career in teaching, research and consulting includes a B.S. in Mechanical Engineering and a Ph.D. in Economics from Southern Methodist University. He has done Post Doctoral Studies at the University of Chicago.

His career in business and teaching includes being a Manufacturing Engineer for Texas Instruments in Dallas, Texas, from 1957-1960; Assistant Professor of Economics at Wichita State University, Wichita, Kansas, from 1965-1972; and an Assistant Professor of Economics at the University of Texas at Arlington and he did consulting work for financial institutions in the Dallas-Fort Worth area from 1972-1975.

Dr. Frnka has also been active in the American Economic Association, the American Financial Association, and Alpha Kappa Psi.

Outside his interests in teaching and research he enjoys tennis and snow skiing. His wife is the former Betty Ann Martin of Dallas, Texas, and she works for Curt Matthews Real Estate. They have an eleven year old daughter, Tricia Lee, who likes to ride horses.

STATE ECONOMIC INDICATORS

Indicator	May 1980[10]	April 1980[11]	May 1979[11]	Per Cent Change One Month Ago[12]	Per Cent Change One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	1,030,800	1,008,900	997,500	2.2	3.3
Non-Ag Employment	829,000	835,500	842,700	—0.8	—1.6
Mining	10,000	9,900	9,400	1.0	6.4
Contract Construction	44,400	43,400	48,200	2.3	—7.9
Manufacturing	219,400	225,600	235,800	—2.8	—7.0
Transportation and Public Utilities	41,700	41,700	40,700	0.0	2.5
Wholesale and Retail Trade	162,100	162,400	163,200	—0.2	—0.7
Finance, Insurance and Real Estate	33,100	33,100	32,900	0.0	0.6
Service	121,100	120,600	117,600	0.4	3.0
Government	197,300	198,800	194,900	—0.8	1.2
Unemployment Rate (Per Cent Labor Force)	6.9	6.4	5.1	——	——
Average Weekly Earnings in Manufacturing	205.06	207.97	196.71	—1.4	4.2
Average Hourly Earnings in Manufacturing	5.34	5.36	4.93	—0.4	8.3
Average Weekly Hours in Manufacturing	38.4	38.8	39.9	1.0	—3.8
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	3,036	3,248	3,178	—6.5	—4.5
Gasoline delivered to Dealers (gals.)[3]	118,805	111,203	114,356	6.8	3.9
Dairy Production					
Milk (lbs.)[4]	75,000	76,000	76,000	—1.3	—1.3
Egg Production[4]	133,000	132,000	144,000	0.8	—7.6
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	9,900	21,100	33,300	—53.5	—70.3
Construction Loans	1,200	1,900	4,100	—36.8	—70.7
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,599,287	1,554,343	1,598,640	2.9	0.04
Telephones in Service[7]	1,483,096	1,487,926	1,421,382	— 0.3	4.3
RETAIL SALES TAX COLLECTIONS[8]	1,226,416	1,131,457	1,275,131	8.4	—3.8
AGRICULTURE (ooo's)[9]					
Total Cash Receipts from Farm Marketings					
Cash Receipts from Marketing Livestock					
Cash Receipts from Marketing Crops					

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[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for March

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago
Aberdeen	31.7	41.5	8,182	0.0	5.3	39,504	2.8	—5.4	91,600	51,900	443,000
Baldwyn	—5.3	—1.6	4,684	0.1	5.9	17,784	—9.3	—18.4	——	——	——
Batesville	——	——	8,675	0.1	5.1	52,564	17.4	27.2	70,000	81,500	109,200
Bay Springs	——	——	——	——	——	20,750	—2.4	—14.8	——	——	——
Bay St. Louis	——	——	13,326	0.4	7.1	36,420	29.5	7.5	102,395	126,000	231,146
Belmont	—5.3	—0.6	2,253	—0.1	5.0	8,332	7.3	—11.0	——	——	——
Belzoni	——	——	4,908	0.6	6.1	24,484	—2.5	—6.6	16,119	45,900	66,700
Biloxi	——	——	45,342	—0.4	2.3	230,982	11.6	5.3	758,328	628,205	882,187
Brandon	——	——	11,654	0.3	1.1	23,024	—12.1	—16.4	178,500	1,480,500	799,405
Brookhaven	——	——	15,661	—1.7	0.6	101,406	13.1	2.6	——	——	——
Brooksville	9.7	36.4	1,342	0.7	4.9	2,302	3.9	—36.3	——	——	——
Canton	——	——	10,718	0.4	4.2	60,965	14.3	—0.8	110,876	110,586	153,800
Carthage	——	——	7,480	0.7	6.6	35,406	3.5	8.1	82,700	13,800	815,100
Charleston	—8.3	4.2	4,113	0.2	3.2	13,556	12.1	—4.4	——	——	——
Clarksdale	—2.4	4.9	20,959	0.1	4.4	106,591	3.8	0.0	114,558	92,500	351,822
Cleveland	——	——	13,879	—1.6	3.2	96,392	24.7	8.6	——	——	——
Collins	—9.1	0.3	4,641	0.5	3.8	35,186	6.1	17.6	——	——	——
Columbia	——	——	15,667	0.4	4.3	69,746	10.9	—0.6	——	——	——
Columbus	——	——	33,039	—1.2	3.0	194,743	3.3	—5.9	23,024	236,324	389,100
Corinth	—13.4	—1.6	20,693	0.2	4.3	104,948	9.0	0.9	336,200	110,630	93,576
Crystal Springs	——	——	5,865	—0.3	5.5	23,633	17.1	0.8	104,500	47,500	6,000
Drew	——	——	2,699	—1.1	3.6	14,091	62.4	20.4	——	——	——
Edwards	—17.7	15.5	1,656	—0.1	4.9	4,697	48.2	2.5	——	——	——
Ellisville	—2.9	40.3	3,860	—0.7	6.1	28,135	140.8	121.0	——	——	——
Eupora	11.0	2.8	4,404	0.2	4.6	15,556	—1.7	—12.2	——	——	——
Fayette	—4.6	—3.6	3,325	0.6	6.4	9,241	6.9	13.2	——	——	——
Forest	4.1	16.2	5,104	0.2	5.3	50,391	9.6	—9.5	——	——	——
Greenville	—15.2	4.8	37,321	0.6	5.0	243,768	14.1	—7.7	——	——	——
Greenwood	——	——	23,998	0.1	3.1	166,845	30.2	14.3	148,900	315,053	351,800
Grenada	——	——	14,249	0.3	4.4	81,288	28.4	5.6	778,800	42,400	459,000
Gulfport	——	0.1	60,825	—0.6	4.0	237,064	12.3	—8.3	979,388	1,407,862	967,671
Hattiesburg	——	——	58,906	—0.9	4.9	312,020	6.3	—3.7	1,962,859	2,569,488	10,153,865
Hernando	——	——	7,152	0.6	6.2	20,394	3.2	—3.0	72,200	122,875	169,831
Hollandale	11.1	38.4	3,393	0.1	5.9	12,622	2.7	3.4	7,750	7,750	60,058
Holly Springs	——	——	7,344	—0.2	3.9	36,673	15.3	—2.4	——	——	——
Houston	——	——	5,614	0.4	3.6	24,231	16.1	—12.7	88,800	1,600	523,880
Indianola	—4.9	4.8	7,823	0.0	5.0	55,898	3.0	—1.5	——	——	——
Iuka	——	——	5,526	0.5	10.4	23,614	2.8	9.3	——	——	——
Jackson	——	6.3	224,980	0.0	4.0	1,551,813	24.7	—1.9	5,899,404	9,868,934	15,237,062
Kosciusko	2.4	—2.9	9,569	—0.1	3.0	49,812	12.8	99.7	50,500	94,300	38,333
Laurel	—6.3	——	34,343	0.1	4.6	460,873	124.8	111.2	4,203,199	2,287,426	697,685
Leland	——	——	5,109	0.1	5.8	20,905	24.8	—23.1	183,550	40,950	59,454
Lexington	——	——	4,773	0.0	4.0	19,937	30.5	16.7	——	——	——
Louisville	—13.2	6.0	10,650	0.0	3.7	42,724	—5.5	—5.5	72,500	306,877	134,000
Lucedale	——	——	8,308	0.5	6.8	32,720	—2.8	9.8	73,500	40,500	88,000
Lumberton	——	——	2,918	0.0	3.7	7,947	11.2	—2.8	——	——	——
Macon	——	——	3,723	—0.3	3.6	15,286	19.5	2.4	——	——	——
Magee	——	——	5,304	0.6	3.9	38,624	9.3	7.4	——	——	——
Magnolia	—7.5	4.5	4,191	—0.4	4.3	8,631	9.3	—44.8	59,000	1,600	12,700
Marks	—5.6	22.6	5,549	0.3	5.3	19,228	58.9	22.8	——	——	——
McComb	——	——	19,767	0.2	5.0	115,771	24.9	4.4	531,575	70,600	664,338
Meadville	13.2	26.3	——	——	——	4,397	—6.7	—26.7	——	——	——
Mendenhall	—31.1	—16.1	6,526	0.9	5.1	17,366	5.0	—25.1	500	10,000	11,900
Meridian	——	——	48,108	0.0	3.9	320,564	2.4	—3.7	1,171,373	715,457	818,335
Monticello	50.8	79.7	4,845	0.3	7.1	15,861	—7.6	0.4	36,200	31,000	35,400
Morton	——	——	3,493	0.8	3.1	17,834	19.6	17.4	——	——	——
Moss Point	50.1	5.3	16,863	0.3	3.0	43,956	24.3	8.2	——	147,950	141,938
Natchez	—7.1	4.5	29,524	0.1	5.2	199,763	8.6	10.5	1,192,880	233,205	288,751
New Albany	—35.7	——	11,178	0.1	4.2	54,782	24.3	4.5	891,681	139,000	260,500
Newton	——	——	4,042	—0.3	3.0	22,123	9.7	3.5	56,507	31,500	77,716
Ocean Springs	——	——	15,738	—0.2	3.4	65,731	8.1	3.4	226,414	524,140	534,934
Okolona	—12.3	—13.9	3,415	—0.2	3.2	14,783	34.3	26.3	——	——	——
Oxford	——	——	20,506	—4.4	3.5	78,408	7.0	3.2	137,000	93,320	208,479
Pascagoula	7.7	47.3	34,928	0.0	2.5	198,115	8.3	0.6	1,208,459	845,868	431,445
Pass Christian	——	——	5,534	0.5	2.6	15,759	91.7	19.4	1,551,720	114,000	208,545
Philadelphia	——	——	11,443	0.0	4.0	43,305	—2.5	—14.2	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago	Current Month May	Month Ago	Year Ago
Picayune	——	——	15,108	0.1	4.8	68,011	10.0	— 5.3	25,351	111,000	950,528
Pontotoc	2.6	1.8	9,295	0.3	3.1	35,605	15.7	12.2	——	——	——
Poplarville	——	——	4,113	—0.2	2.8	12,108	—12.5	—24.5	——	——	——
Port Gibson	—20.4	— 7.0	5,780	0.9	7.9	15,471	— 5.1	5.3	——	——	——
Prentiss	——	——	——	——	——	16,186	2.4	—13.9	59,295	195,000	59,000
Quitman	—10.8	1.7	4,882	0.3	4.7	23,527	8.0	— 3.9	——	——	——
Raymond	— 6.1	— 9.9	2,965	—6.7	7.8	8,419	— 0.6	5.3	——	——	——
Richton	——	——	1,997	0.4	6.0	9,501	0.9	60.1	1,200	——	——
Rosedale	— 5.2	— 9.0	1,632	0.7	1.9	7,799	38.4	6.5	——	——	1,500
Ruleville	— 9.6	——	1,991	—0.2	1.1	9,382	5.5	—17.2	119,875	5,000	173,950
Sardis	——	——	3,507	—0.4	2.8	16,794	17.0	— 1.3	2,000	4,000	16,000
Senatobia	—15.8	— 3.1	6,755	—0.3	6.8	38,973	— 0.8	— 1.5	9,800	9,000	145,000
Shelby	28.0	64.7	1,671	—0.2	—1.2	9,800	10.0	—13.2	——	——	——
Starkville	——	——	21,875	—12.2	—4.9	85,135	11.7	— 1.9	379,000	1,098,500	1,633,000
Summit	——	——	1,631	1.0	4.6	8,406	4.8	—12.4	——	——	——
Taylorsville	2.1	8.4	1,771	—0.5	2.9	10,451	1.4	—19.8	——	——	——
Tchula	——	——	2,024	0.0	1.8	4,434	2.4	— 3.7	——	——	——
Tunica	——	——	4,325	0.0	5.1	16,507	15.3	—11.8	——	——	——
Tupelo	——	——	37,420	—0.1	4.2	264,453	8.5	— 7.6	397,737	2,374,145	667,500
Union	— 1.4	— 9.6	2,744	0.0	3.8	12,438	— 0.6	—20.7	——	——	——
Utica	— 3.0	—24.5	3,016	0.2	5.1	7,738	— 2.2	—19.6	——	——	——
Vicksburg	— 3.8	8.7	38,817	0.2	10.2	214,613	34.6	12.2	——	——	——
Walnut Grove	——	——	1,029	1.0	5.1	1,352	— 2.7	—44.3	——	——	——
Water Valley	——	——	4,041	0.4	5.0	21,069	12.4	7.9	——	——	——
Waynesboro	——	——	7,497	—0.5	6.8	63,088	22.3	2.6	4,000	36,700	90,000
West Point	——	——	12,322	0.4	5.7	51,870	22.2	4.7	164,750	165,006	594,000
Wiggins	—20.0	—13.2	6,195	0.0	4.8	18,591	3.7	15.2	47,500	159,275	84,930
Winona	——	——	5,013	0.2	3.8	29,044	9.0	— 5.2	——	——	——
Yazoo City	—29.0	— 7.7	12,314	0.1	4.7	68,843	35.0	20.4	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON [Hinds and Rankin Counties]	May 1980[1]	April 1980	May 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	154,100	151,000	146,800	2.1	5.0
Unemployed Persons	7,600	6,300	5,300	20.6	43.4
Per Cent of Labor Force	4.9	4.2	3.6	——	——
Employed Persons	146,500	144,700	141,500	1.2	3.5
Non-Ag Wage & Salaried	126,400	125,800	121,500	0.5	4.0
Manufacturing	17,900	17,100	17,700	4.7	1.1
TELEPHONES IN SERVICE	244,271	244,448	235,160	— 0.1	3.9
CITY SALES TAX COLLECTIONS	1,595,691	1,289,733	1,631,430	23.7	— 2.2

BILOXI-GULFPORT [Hancock, Harrison and Stone Counties]	May 1980[1]	April 1980	May 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	64,420	63,300	61,980	1.8	3.9
Unemployed Persons	3,560	3,490	3,200	2.0	11.3
Per Cent of Labor Force	5.5	5.5	5.2	——	——
Employed Persons	60,860	59,810	58,780	1.8	3.5
Non-Ag Wage & Salaried	51,780	51,260	49,760	1.0	4.1
Manufacturing	8,480	8,080	8,410	5.0	0.8
TELEPHONES IN SERVICE	111,701	112,177	107,210	— 0.4	4.2
CITY SALES TAX COLLECTIONS	483,805	426,330	491,132	13.5	— 1.5

[1] Preliminary

Bonded Debt of Selected Cities at September 30, 1978 In Dollars

Source: Bond Division Department of Bank Supervision, State of Mississippi

CITY	True Value per Capita	Assessed Value Per Capita
Aberdeen	9,491	1,758
Ackerman	7,989	1,997
Amory	8,589	1,878
Baldwyn	——	——
Batesville	20,314	2,031
Bay Springs	13,033	2,606
Bay St. Louis	8,080	2,307
Belmont	13,509	2,026
Belzoni	3,864	2,010
Biloxi	7,358	1,765
Booneville	8,470	1,796
Brandon	15,678	1,568
Brookhaven	7,787	2,336
Calhoun City	11,745	1,762
Canton	5,863	1,468
Carthage	7,590	1,764
Charleston	5,440	1,088
Clarksdale	5,574	2,314
Cleveland	14,183	2,893
Clinton	19,465	3,893
Collins	12,390	1,975
Columbia	11,413	1,922
Columbus	7,684	2,909
Corinth	5,910	1,770
Crystal Springs	8,998	1,800
Drew	7,629	1,758
Durant	5,650	1,130
Ellisville	4,954	895
Eupora	12,903	2,581
Forest	13,780	3,445
Greenville	10,251	2,559
Greenwood	6,529	2,510
Grenada	15,347	1,918
Gulfport	8,500	2,297
Hattiesburg	12,355	2,072
Hernando	13,388	3,867
Hollandale	5,204	2,083
Holly Springs	9,256	4,281
Houston	12,695	3,174
Indianola	7,724	1,931
Iuka	9,100	910
Jackson	16,301	5,216
Kosciusko	10,[illegible]4	2,67[illegible]

CITY	True Value Per Capita	Assessed Value Per Capita
Laurel	6,751	2,093
Leland	——	——
Lexington	5,746	1,382
Louisville	11,909	3,573
McComb	——	——
Macon	7,352	1,904
Magee	8,153	2,038
Mendenhall	11,363	2,179
Meridian	8,344	2,503
Morton	9,796	2,449
Moss Point	12,070	2,368
Natchez	——	——
New Albany	7,136	1,926
Newton	10,942	2,188
Ocean Springs	12,942	3,235
Oxford	10,602	3,181
Pascagoula	12,068	3,631
Pass Christian	14,986	5,945
Philadelphia	8,012	1,834
Pontotoc	15,096	2,533
Port Gibson	5,302	1,530
Prentiss	13,823	1,382
Richton	6,910	1,728
Ridgeland	24,698	6,175
Ripley	8,788	1,489
Ruleville	7,944	3,809
Sardis	7,775	2,333
Senatobia	8,508	1,759
Shelby	3,548	1,947
Starkville	7,863	2,621
Summit	5,932	1,635
Taylorsville	7,608	2,533
Tunica	8,560	2,853
Tupelo	24,394	4,008
Utica	8,502	1,701
Vicksburg	7,667	3,008
Water Valley	——	——
Waynesboro	8,818	1,250
West Point	10,502	2,100
Wiggins	5,273	1,582
Winona	6,388	1,833
Yazoo City	8,452	1,781

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DR. FRIEDER

DR. SMITH

Larry A. Frieder did his doctoral work at Arizona State University. He holds B.B.A. and M.B.A. degrees from the University of Michigan. He has considerable experience as a financial consultant to both the private and the public sector.

Stanley D. Smith did his doctoral work at Arizona State University. He holds B.B.A. and M.B.A. degrees from the University of Oklahoma. He specializes in the teaching and research of financial institutions.

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Are Usury Statutes Finally Doomed ?

by

Larry A. Frieder, Florida A&M University
and
Stanley D. Smith, Emory University

In the past year, America has experienced record-interest rates. This dramatic interest rate advance resulted in Public Law 96-161 being enacted December 28, 1979. This law provided for temporary federal preemption of state usury ceiling on home mortgage loans and most business and agricultural loans. This temporary action was addressed in a more permanent manner with President Carter's signing of the Depository Institutions Deregulation and Monetary Control Act of 1980 on March 31, 1980.

This act affected four interest rate ceilings: (1) state usury ceilings for home mortgages were abolished permanently unless a state legislature reinstates them within a three year period, (2) state ceilings on all business and agricultural loans of more than $25,000 were lifted for three years, (3) Regulation Q, the interest rate ceiling on savings deposits, is to be phased out over the next six years, and (4) the maximum interest rate on credit union loans was raised from 12% to 15%. The new laws represent major progress in deregulating the financial marketplace and allowing the free market to allocate funds. Nevertheless, the states may consider reinstating the usury ceilings that were lifted. Also, state ceilings on various types of consumer loans were not affected.

Before the previously described federal government action, many states had taken steps to modify their usury laws in recent years. The reasons for the increase in interest rate ceilings activity has attracted widespread attention. The main explanation for the current movement of states and the Federal Government to modify usury statue centers on the need to reflect modern economic circumstances. Specifically, the current inflationary-high interest rate environment has resulted in usury laws causing borrowers to be rationed out of credit markets. Moreover, investment and economic growth of states with usury statutes may have not been encouraged. It is argued that a free market approach should replace obsolete usury statues in determination of interest rates applicable to credit markets. Nevertheless, politicians have not chosen to completely abolish interest rate ceilings.

This article gives insights into the reasons for the recent usury ceilings activity. The article first relates the development of consumer credit (consumer and mortgage loans) in the United States to the present high interest rate environment and existence of usury ceilings. Second, the economic theory of usury ceilings is discussed. Third, an analysis of nonprice methods of rationing credit is given. Evidence supporting the use of these methods, as well as the implications of their use is examined. Fourth, the political considerations surrounding usury laws are indicated. Recent modifications of these laws are analyzed. Finally, the article concludes with a look at existing trends related to interest rate ceilings.

Development of Consumer Credit

Large scale consumer credit in the United States has its roots in the Post-World II economic environment. Commercial bank asset structures reflected their World War II role of financing the Federal Government's budgetary deficits that could not be met with saving flows. Banks acquired massive amounts of Treasury obligations that provided very low yields (e.g., in 1950 3-month governments only paid 1.18%) (16). Alternative asset investments such as municipal and prime commercial loans also provided low interest income. Most corporations of substantial size enjoyed a high level of liquidity.

The preceding description and a great consumer demand for durable products and housing suggested profitable asset management opportunities to financial institutions. Credit to finance consumer wants offered relatively attractive interest rate spreads[1] vis-a-vis alternative assets categories. Accordingly, consumer and mortgage loan departments were established in a great number of banks that had previously avoided these investment areas. These loan departments were aggressively promoted by a great amount of retail-marketing effort.

The previously described promotional programs created strong growth in consumer credit and considerable momentum. These promotional programs implicitly required assurances that retail credit would be available on a regular basis over time (i.e., credit availability would not be sensitive to monetary cycles).

This implicit assurance was maintained in the early growth period by banks' liquidation of excess liquidity. As this source of growth dried up, sources of funds for consumer credit increasingly hinged upon (1) Federal Reserve monetary expansion policies, (2) a change in commercial banks' deposit mix toward time and savings deposits with lower reserve requirements and (3) purchasing funds not subject to reserve requirements.

The shift from reliance upon excess liquidity to interest-rate-sensitive sources of funds has placed the consumer credit facet of financial institutions in jeopardy. That is, the basic consumer credit system has excess liquidity, easy monetary policies, and a noninflationary economic environment as its roots.

Dramatic changes have occurred in the past ten years. There have been persistent increases in the rate of inflation and correspondent "stop-and-go" tight monetary policies to fight inflation. During this period interest rates have advanced to unprecedented levels. Moreover, the volatility of the short-term interest rate has increased greatly due to the shift in the policy of monetary authorities to focus upon the growth rate of the money supply instead of interest rate levels. The serious pursuit of inflation fighting necessarily involves increased volatility in interest rates, tight money, and acceptance of higher levels of interest rates.

The consequences of the previously described change in the fundamental environment that interrelates with consumer credit is that financial institutions face serious and unhealthy rate spread squeezes. Indeed, in 1974 rates on some varieties of purchased funds exceeded the gross rates available on some varieties of consumer loans for the first time. These favorable rate spreads have transformed the once attractive consumer credit area to an unattractive and sub-optimal asset category. Accordingly, as interest rates remain at their historically high levels, one may expect financial institutions to limit the availability of funds to the consumer credit area unless statutory provisions are changed to reflect modern economic reality. In this regard, it is ironic that past political views against higher consumer credit rates now effectively operate to discourage financial institutions from providing funds to this area.

Financial institutions will only remain active in the consumer credit area if it meets standard risk-reward criteria. Usury laws that remain unchanged may give real impetus for financial institutions to terminate their commitment to this most important area. The retail-credit marketing necessity to maintain consistent availability through time, despite usury laws, suggests a most tenuous, if not ill-advised, business proposition.

There are several current examples of the disruptive effects of interest rate ceilings on major suppliers of consumer credit. With the March 14, 1980, Federal Reserve Board anti-inflation effort the cost of funds for money center lenders in consumer credit exceeded some state ceilings. The fact that state ceilings on various types of consumer loans were not affected by the new Federal laws triggered the following events:

. .Citicorp has taken steps toward moving its credit card operations to South Dakota to avoid the adverse effect of the New York usury law on its consumer loan portfolio.

. Beneficial Finance Corporation's announced plans to close 100 loan offices.

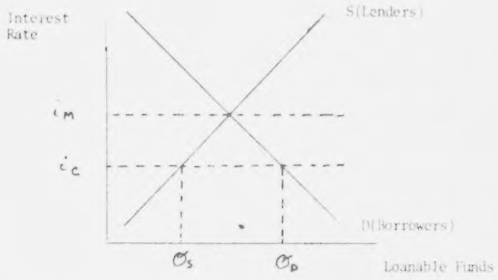
. .the country's major retailers and banks alteration of consumer installment credit plans.

In brief, in the present era of high interest rates and inflation, interest rate ceilings effectively limit the ability of financial institutions to allocate funds to consumer credit. Moreover, the very institution of retail credit is endangered.

Economic Theory

Inflation and the associated high interest rates are the principal causes for the rejuvenation of effective usury ceiling problems. Interest rates are prevented from performing their rationing function and an artificial excess demand is created by the usury ceilings. Generally the response of the lenders is the primary concern of usury analyses because the supply function of credit becomes the constraint. The response of the lenders in the form of portfolio adjustments and nonprice rationing will mainly determine the final result of the effective usury ceilings on the financial and real sectors of the state economy. Portfolio adjustments by banks may result in altering the availability of credit to specific loan categories within the state, changing the flow of funds between states, and/or significantly affecting bank earnings.

FIGURE 1



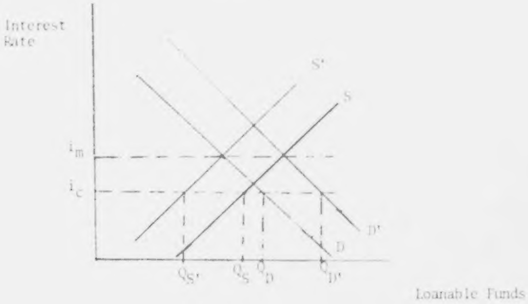
As shown in Figure 1, the market-determined interest rate for a loan category is ^{i}M. As the usury ceiling becomes effective at ^{i}M or below, both suppliers and demanders of credit are prohibited from moving upward along either the supply or demand curve. Assuming elastic supply and demand curves if the usury ceiling (^{i}C) is below ^{i}M, the quantity demanded (Q_D) will be greater than the quantity supplied (Q_S).

A possible lender response to this situation would be to adjust the portfolio by investing in substitute credit instruments with higher risk/return trade-offs. Substitute assets not subject to usury ceilings may include loans made outside the state, national credit market instruments, or loans made within the state but exempt from usury statutes. As more is invested in substitute assets and less is invested in the loans subject to usury ceilings, the supply function of those loans covered by usury ceilings will shift leftward to S' in Figure 2. This leftward shift will further aggravate the excess demand condition by reducing the amount of credit available at ^{i}C (Q_S-Q_S). The degree of this leftward shift in the supply curve will depend on the number, closeness, and availability of substitute assets (e.g., Federal funds and Treasury securities).

These portfolio adjustments may not affect bank earnings to any appreciable degree, but may significantly affect the real sectors of the state economy. The results will be that certain credit-financed expenditures in the state will decrease and state expenditures and income will be negatively affected.

Another possible response to usury ceilings is a rightward shift in the demand function from D to D' (see Figure 2). For example, on a state's border consumers across the stateline may try to obtain a loan in the state with usury ceilings because the rates on the loan covered by usury statutes may be lower than in the other state. The increased demand will further aggravate the excess demand condition by ($Q_{D'}$-Q_D).

FIGURE 2



Nonprice Credit Rationing

When interest rates can no longer act as a rationing device, banks may not necessarily shift into nonusurious assets. Instead, the banks may ration credit by altering the nonprice terms of the loans or by using certain characteristics of the borrowers. These techniques are discussed to indicate how usury statutes have been obviated in many states which failed to cover nonprice terms in their statutes.

The nonprice terms of loan contracts that have been discussed in the literature include: (1) increased compensating balances, (2) decreased maturity structure, (3) increased collateral, (4) reduced relative cost of loans and (5) increased assessment or fees. The risk/return tradeoff of a specific loan may be improved by reducing the risk, increasing the effective rate, or lowering its cost.

Compensating balances may be increased to reduce the risk associated with some loans, but they are most often used to increase the effective interest rate on business loans and loans to finance companies. One writer indicates: "They have turned to techniques like compensating balances to circumvent limitations such as usury ceilings." (13, p. 116).

Another technique of nonprice rationing is decreasing the maturity structure of new loans. This method has been used in the mortgage market (see for example Ostas [14]). Assuming the face value of the mortgage is constant, a shorter maturity implies that the time risk and the associated uncertainties that could occur are reduced.[2]

A bank may require new or additional collateral to reduce the risk of the loan. The cost of the loan also may be reduced by eliminating investigative and monitoring costs. Of course one needs to consider the cost of monitoring the collateral.

Another way of reducing the cost of the loan is to make fewer small loans. Small loans generally are more costly because they have a higher operating expense per dollar loaned. During periods of rationing this alternative may reduce the availability of credit for relatively small loans to individuals and small businesses.

A bank may also ration credit by increasing various assessments and fees. A common example is the usage of points in the first mortgage market. Another common example is requiring larger down payments (see for example Rolnick, Graham and Dahl [15]). These two examples may increase the effective return, reduce the risk and/or reduce the number who may qualify. Other examples are increases on commitment fees, prepayment premiums, and late charges.

In addition to rationing by altering the loan contract, banks may also ration according to the characteristics of the borrower. These characteristics relate to both the risk of the loan and the long-term desirability of a continuing and profitable relationship with the borrower.

The first characteristic relates to the income, wealth, and expected profitability of the borrower. As this characteristic increases, relative to a constant loan amount, the risk of default decreases. When the additional risk of default and the higher relative operating loan costs are considered together, it is easy to see that the restriction of loans to individuals and small businesses is an expedient path for banks to follow.

For the same reasons, the size of the borrower is an important characteristic. For example, Anderson and Ostas (1, p. 33) note that, "It is a fact that bank lending to larger businesses generally does increase greatly as a proportion of total business lending during a tight money period."

A third characteristic is the location of the borrower. Generally, more information about a local borrower would be readily available than information about a non-local borrower. The usage of this characteristic is shown by Harris (11).

The final characteristic is a well-established, long-term customer. The use of this characteristic may be based on the reliability and cost of the information as well as the default risk. For example, a new business probably has a higher risk of default. A problem here is that credit for new innovative firms is necessary for long-term economic growth. Evidence supporting the use of this characteristic has been provided by Harris (11).

A consequence of rationing by borrower characteristics is that the borrowers with the "positive" characteristics in the lower risk classes may have the same or more credit available at the market-determined rate or lower. Therefore, new, small, lower-income borrowers may be negatively affected by effective usury ceilings. These actions are evidenced by Greer (9), who found an inverse relationship between loan rejections at consumer finance companies and interest rate ceilings. It is likely that the small, riskier borrower may be barred from access to the legal credit markets.

In sum, the lenders will try to reduce excess loan demand [$(QD - QS)$ in Figure 1] by using the nonprice rationing techniques to upgrade the quality of their loans and to seek other compensation outside the usury laws. To the extent that this occurs, the supply of loans at i_c may be greater than QS because dimensions other than interest payments have been introduced. The result is the supply curve in Figure 1 would shift to the right by some measure. The degree of the shift will depend on the usage of the various nonprice rationing techniques.

State usury laws vary considerably. Some of the discussed nonprice rationing techniques may or may not be covered by state statutes. The tighter the restrictions of statutes the more likely credit will be reduced for usurious loan categories, capital flows between states will be distorted, and/or the lender's earnings will be reduced. A very important consequence is that the small, riskier borrower whom the usury laws were intended to protect is the one who is harmed the most.

As the restrictions are relaxed, the severity of these consequences will probably be reduced. An important consideration here is that if these nonprice rationing methods are easily and widely utilized, then there does not appear to be much reason to have a usury law. The usury law will be circumvented with a less efficient method of rationing.

Political Considerations

As one reads this discussion and most of the literature on usury laws there seems to be a very condemning theory and evidence against usury laws. The question naturally arises, "Why do we still have usury laws?" Since, in general, neither the public nor the financial institutions benefit from usury laws, one has to ask what motivates our lawmakers to keep these ceilings.

K. L. Avio (2) presents a "welfare" argument for usury laws. According to Avio, low-income, high-risk borrowers prefer current consumption over equivalent future consumption. The repayment burden from current borrowing may reduce future consumption below what society deems the minimum acceptable standard of living and this necessitates income supplements from the state. By rationing out those borrowers, their consumption patterns will be smoothed out among time periods and kept above (or closer to) the desired standard. This action will reduce supplements and reduce the tax burden on constituencies.

Avio's argument has been criticized by Durkin (5) and Jadlow (12). As Jadlow (12, p. 109) explains:

> "Legislators are generally interested in supporting policies which will help them get reelected. . .Most potential borrowers think that they may be benefited by such ceilings and they will probably continue to think this unless they are knowingly harmed, for example, unable to get a loan, by such a ceiling. Thus, as long as the number of people made worse off by usury laws continues to be small relative to the number not harmed by them, it seems likely that consumers will continue to provide considerable political support for these laws.. . . Merchants and suppliers of consumer loans have opposed usury laws because, to the extent that such laws are effective, they may reduce merchants' sales and keep the interest rates received by lenders at lower levels than would be in the absence of regulation. There are ways to circumvent usury laws, however, and this has helped ease the political pressure from business for repeal of such laws. Consequently, in most states, the overall political support for usury laws, has tended to outweigh the opposition to such laws."

With the most recent increase in interest rates there has been much political pressure to at least modify usury ceilings. Several alternatives are available at the state level. First, the state legislature could abolish usury ceilings. Second, the ceiling could be set at a level substantially above prevailing rates. Third, the legislature could adopt a "floating" ceiling that is tied to some market interest rate.

As recorded by the Federal Reserve Bank of St. Louis (6) in April, 1979, fourteen states still had maximum interest rates on residential mortgages set at ten percent or less. Sixteen states[3] had responded to high mortgage interest rates by adopting floating usury ceilings. The ceilings were tied most commonly to the Federal Reserve discount rate or the yield on long-term Government bonds. In March of 1979, the ceilings in all but one of the floating-rate states exceeded the conventional mortgage rate and ranged from 10.50 percent to 15.25 percent (6). Table 1 indicates the usury laws of selected states prior to the March 31, 1980, deregulation act.

The floating usury ceiling would seem to be a popular alternative for politicians. The elected representative can point out that the merchants and lenders have been helped because the free-market interest rate will be affected little, if any. On the other hand, the representative can tell the general public that they have been helped because they are still protected from exploitation, yet more credit should be available for them. The politician allegedly has something to give everyone, while in reality all that has been done is to remove an obstruction to the operation of the free market system. Another advantage of this alternative is that a constantly revised floating rate promises to continually reflect market interest rates and thus the periodic need to burden legislators to modify an obsolete ceiling is eliminated.

Several states have responded to outmoded interest rate ceilings by enacting new laws that raise the ceiling.[4] This approach temporarily solves usury problems in that the rate will assure credit availability to borrowers and adequate returns to lenders. However, since interest rates presently are very high, the representative is placed on record as supporting rates in the 18% - 25% range. Support for such rates made visible by various media can easily result in public criticism of the representatives. Also, this alternative would seem to indicate a need for legislative reform at various points in the future, if the new ceiling becomes outmoded because of changing market conditions.

TABLE 1
INTEREST RATE CEILINGS IN SELECTED STATES*

	Consumer			
State	**Installment**	**Credit Card**	**Mortgage**	**Business Purpose**
Arizona	18%	18% on advances 16% on purchases	16%	18%
California	No ceiling	18% up to $1,000 12% above $1,000	No ceiling	No ceiling
Florida	18% + 2% loan origination fee (maximum $50)	18%	No ceiling	18% on loans of less than $500,000 No ceiling on loans of more than $500,000
Illinois	About 16% (9% add-on)	18%	No ceiling	No ceiling
Kentucky	About 11% (6% add-on)	18%	No ceiling for loans above $15,000	No ceiling for corporations more than $15,000
Maryland	18% up to $3,500 12% above $3,500	18% up to $500 12% above $500	No ceiling	No ceiling
Massachusetts	18% up to $3,000 No ceiling above $3,000	18% up to $500 12% above $500	No ceiling	No ceiling (20% extortionate ceiling does not generally apply to banks)
Minnesota	12%	18%, must offer customers alternative of 12% with $15 annual fee	Higher of FNMA index or Long-term Government Bond Index + 2%, set monthly (14%]	No ceiling on corporations No ceiling on loans of more than $100,000 Discount rate + 4½% (17.5%)
New York	Varies from 12% to 18% depending on type of loan	18% up to $500 12% above $500 12% on advances	Long-term Government Bond Index + 2%, set quarterly (10.50%)	No ceiling on corporations No ceiling on loans of more than $250,000 No ceiling on demand loans above 5,000 secured by marketable collateral Long-term Government Bond Index + 2%, set quarterly (10.50%)
North Carolina	15% up to $5,000 12% above $5,000	18% up to $5,000 15% on $5,000-$10,000 12% above $10,000 (credit card usage above the $5,000 level is uncommon)	No ceiling	No ceiling for corporations (with more than $25,000 in capital) 12% on loans of less than $25,000 more than $25,000
Oregon	15%	15%	12% on loans of less than $50,000 No ceiling on loans of more than $50,000	12% on loans of less than $50,000 No ceiling on loans of more than $50,000
Pennsylvania	About 13% (6% discount)	15% on purchases 12% on advances	Long-term Government Bond Index + 2% on loans of less than $50,000, set monthly (14%) No ceiling on loans of more than $50,000	No ceiling for corporations No ceiling on loans of more than $10,000
Texas	18% up to $1,500 12% $1,500 to $2,500 10% above $2,500 or 14.4% on entire balance	15% up to $500 10% above $500	12% absolute ceiling, below that, Long-term Government Bond Index + 2%	18% for corporations 10% on loans of less than $250,000 18% on loans of more than $250,000
Washington	12% (higher for consumer finance companies)	12%	12%	No ceiling for corporations $50,000
National bank exemption	Discount rate plus 1.0 percentage point on all types of loans made by national banks (14%)			

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*Ceilings indicated are approximate based upon a synthesis of existing state laws; note there are many exceptions to this table in the various states. The rates shown are general indicators only. Federal regulatory as well as legal exceptions and state extortionate limits are not reflected in this table. The provisions of B-96161 and the new Depository Institutions Deregulation and Monetary Control Act of 1980 as discussed in this paper supercede the "mortgage" and "business purpose" sections of this table.

Conclusions

The current era of high interest rates and inflation cause interest rate ceilings to effectively limit the ability of financial institutions to allowcate funds to consumer credit. Various modifications of usury statutes recently made by states and the Federal government should help reduce this problem in the future. It was noted that the very institution of retail credit is endangered in those states that fail to modify obsolete usury ceilings.

Economic theory suggests that the basic response by lenders to usury ceilings is to either substitute nonprice terms to obtain the desired risk/return trade-offs or to adjust their portfolios by investing in alternative assets that are not subject to usury ceilings. The evidence indicates that various types of nonprice credit rationing has been very prevalent in credit markets that are subject to interest rate ceilings. It is expected that current modifications of usury ceilings will result in a decline of the use of nonprice rationing techniques by financial institutions in the future. The evidence also indicates that these portfolio adjustments and credit rationing techniques typically harm the small, riskier borrower whom the usury laws were intended to protect.

Despite condemning theory and evidence against usury laws, politicians are expected to continue legislating interest rate ceilings. However, pressures to modify ceilings will continue to appear whenever consumers and suppliers of credit are harmed. Analysis indicates that in the absence of complete abolition of usury ceilings the floating usury ceilings seem to be the most popular alternative for politicians to pursue in the future. This alternative will reduce the criticism from lenders in that it is based upon a market interest rate, and it still promises to "protect" the public against exploitation.

FOOTNOTES

[1] Precise levels of interest rates cannot be indicted because of local market variations. However, mortgage rates in the 4.5% to 6% range and consumer credit rates in the 9% to 12% range were very attractive to bankers facing a prime rate approximating 3% in the 1951-1955 period.

[2] One should note that generalizations should not be made about this alternative in relation to all maturities if there is a downward sloping yield curve.

[3] For example, Georgia changed its usury ceiling on first mortgage real estate loans under $100,000 from a 10% simple interest rate to a floating rate effective March 9, 1979. The floating rate is 2½% above the yield on long term (20 year maturities) U.S. government bonds and is published monthly.

The Texas Legislature substituted a floating ceiling for a 10% usury ceiling on reisdential mortgages. The new Texas usury ceiling floats two percentage points above the rate on ten-year U.S. Treasury notes and went into effect August 28, 1979.

[4] Florida enacted an interest rate and usury bill (Senate Bill 1262 became law July 1, 1979) that generally amended the interest rate ceilings for licensed lenders from 10% to the equivalent of 18% per annual simple interest unless they currently have a higher rate.

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MEET THE FACULTY

Dr. Don D. Doty

Professor of Economics

Dr. Don D. Doty is a Professor of Economics in the College of Business and Industry at Mississippi State University. Dr. Doty received his B.S. and M.A. degrees from Bradley University, Peoria, Illinois, and his Ph.D. in Economics from the University of Arkansas.

After completing coursework toward his Ph.D., Dr. Doty came to Mississippi State University in the Fall of 1960. The last connection he had with the business world was from 1954-1958, just prior to returning to the University of Arkansas to work on the doctorate. During this four-year period he was the co-owner of a grain elevator, seed processing, and jobbing firm in Illinois.

Teaching Money and Banking, Business Cycles, and National Income Economics have been his major areas of teaching since coming to State.

In the past he has done research and written publications in a number of varied areas from water resources project analysis and regional economic development to the development of emergency medical care systems. Current research interest and activity is centered on the apparent relationship between the revival of interest in the Kondratieff (business) cycle and "survival economics."

Dr. Doty has been associated with a number of the professional organizations, two of which are Southern Economics Association and South West Social Science Association. Nonacademic activities are varied and range from farming in Illinois each Spring to various do-it-yourself projects—the latest of which being the addition of a den and office at home.

Dr. Doty and his wife, Betty, have one daughter Cynthia. Cindy is married and lives in Nashville, Tennessee, where she is a registered nurse and the mother of their two grandsons.

The Dean's Corner

The American Assembly was established at Columbia University in 1950 by Dwight D. Eisenhower who was then president of Columbia. Each year two or more topics of great importance are explored in depths by a group of knowledgeable individuals in the subject being pursued. The topic for the spring of 1980 was "Economic Issues and the President: 1980 and Beyond." Included in the group of appoximately 40 assembled at the University of Southern California were a number of corporation presidents, several economists both in academics and in business and financial firms, journalists, presidents of research organizations (such as National Bureau of Economic Research and the Brookings Institution), high level government officials and others.

In the Report of the Assembly recently published nothing appeared which could be regarded as rare and innovative insights into our contemporary economic problems. Nearly all of the recommendations have been treated in various issues of the "Dean's Corner," for example. However, the thrust of some of the recommendations seems to take a somewhat different direction than presented by the writer of the "Dean's Corner," as these topics were treated. It is felt that a number of the participants in the Assembly probably did not concur in all facets of the 13 or so recommendations. By and large, however, the recommendations presented logical and correct solutions to our economic problems. The diversity of the backgrounds of the participants should have assured representation from most points of view.

The underlying theme of the report seems to be that our "present disorders are the result in large part of a rapid series of adverse economic events—national and international—to which our leadership has not adequately responded during the past decade and a half." Urgent need for the right kind of leadership and correct policies currently exists, if we are to survive the present "disarray" of the economy. If, however, the president, Congress and the various segments of the economy can come together with common goals and proper means of reaching them, the soundness of the economy can yet be reaffirmed in time. The key to solutions, as has been pointed out frequently in previous "Dean's Corners" is sacrifice on the part of all, i.e., the foregoing of present indulgencies in order to provide for a more acceptable level of living standard in the future. A refusal to do so will lead to disastrous consequences, but as indicated in one of the winter issues of this column the American people are probably ready to do that which is right, if proper leadership is provided.

The first recommendation of the Assembly dealt with getting the current run-away inflation under control. Earlier in 1980 it was rampaging at the 20% level. Our system in its present form cannot survive this, and if this is the best we can do, the system does not deserve to survive. However, we can do better. The Assembly Report takes the correct position in stating that excess demand must be removed. The American economy is a complex mechanism, however, and there is always the danger that demand can be dampened to the extent that massive unemployment would result. This is dangerously close to occurring in the summer of 1980. Reducing excess demand, according to the Report, must involve a balanced federal budget—not by increasing taxes, but by reducing expenditures in all categories. It is interesting to observe that President Carter in resubmitting his January budget with its $15 billion deficit, proposed in the spring a new budget brought into theoretical balance by not appreciably reducing expenditures but by raising taxes on gasoline. Not that the gasoline conservation tax is not needed, but to balance the budget in this fashion instead of dealing honestly with the need to reduce expenditures is not calculated to increase the president's credibility among thinking and responsible voters and taxpayers.

In its first recommendation, the Assembly also stressed the need for sound monetary policy, i.e., to keep the increase in the money supply in line with expansion in the real GNP. Since October of 1979 the Board of Governors of the Federal Reserve System has at long last seemed to have paid some attention to the money supply and its effects on prices. Prior to that the Board and the open Market Committee seemed to consistently permit an expansion of the money supply at a higher rate than increases in the real GNP. Inflation has been the inevitable consequences for year, with a mounting cresendo in the past four years. Monetary policy seemed to be pursued only to achieve lower interest rates. Inflation resulted and interest rates as a matter of course increased, in spite of monetary policy attempts to control them. To keep rates down the money supply was allowed to increase, but the policy backfired as inflation developed. Then, in October the Federal Reserve finally got the message and began to control the money supply. Of course, interest rates temporarily soared. This must have panicked the Federal Reserve, because the expansion of the money supply which was restrained for a few months now seems to be on the increase again. Recent figures indicated an annual increase of around 10%, which is much too high commensurate with the real GNP growth.

The second recommendation of the Assembly concerned the need for reducing the percentage which federal expenditures bear to total GNP. This is getting out of hand, and soon we shall overtake Russia in the proportion of public sector to private sector expenditures, if drastic congressional action is not taken. As long as re-election to the House must be faced every 2 years and the Senate every 6 years, one wonders if congressmen will display the intellectual integrity necessary when their re-election is threatened. It may be that we shall have to take such drastic action as to limit congressmen to one term of, say, 6 years for House members and 8 or so for senators. However, the problem may go deeper than this. Those who are receiving money from the government may soon outnumber taxpayers, and it might become impossible to elect sound-minded congressmen. After all, we tend to get the kind of government which we deserve. Perish the thought!

However, the Assembly was opposed to mechanical restraints, such as a balanced budget mandated by law. This would eliminate the flexibility needed, the Report suggested, to pursue proper fiscal policy. This, no doubt, is true, but as the writer has indicated in previous articles, Congress has clearly demonstrated that it does not possess the degree of responsibility necessary for fiscal soundness. Complete irresponsibility in fiscal matters has characterized Congress for some time now. Some sort of "mechanical" restraint may be the only viable alternative at this juncture.

As a part of the second recommendation, the Assembly raised questions about the appropriateness of tying federal aid to individuals to the consumer price index, when wage earners for the most part have not received similar increments. Of course, in terms of equity this is clearly a policy needing reappraisal. But, if the really needy depend on aid to sustain life, and if this aid is minimal (as it should be), to fail to increase the aid with increases in living costs would be to jeopardize the existence of these people. What is actually needed is a hard-nosed evaluation of all aid programs to make sure that only the deserving receive aid and that the amount is minimal commensurate with survival. No one is **entitled** to aid, merely because of lack of financial means. Aid is a gift of those who work and pay taxes, although we have been at the business of doling out funds so long many now act as though it is their inalienable right to receive it.

The third recommendation expressed opposition to mechanical rules of thumb relative to monetary policy. At present the Federal Reserve Board, along with the open Market Committee of the Fed, determines monetary policy in accordance with certain policy weapons. Basically, these involve determining the discount (or rediscount rate), the interest rate member banks are charged when borrowing from the Fed, the ability to change reserve requirements and the ability to influence the level of excess bank reserves through the purchase and sale of securities on the open market (by the Open Market Committee). The last of the three (Open Market Committee) has turned out to be the most important. To soak up excess reserves and reduce the ability of banks to add to the monetary supply by creating additional deposits (mainly by making loans), the Open Market Committee would sell securities. Payment for these would involve the clearing of the payment checks in such fashion as to debit bank reserves. To increase bank reserves and enable banks to expand the monetary supply (demand deposits through loans to customers), the Committee would buy securities. Payment by the Fed for these securities winds up as additional reserves in banks. The problem is that in the minds of many, such as Milton Friedman, the Fed has not done a good job. There has been a tendency to do too little and too late. As a result of the lag in monetary policy changes and their effects on the economy, it often happens that corrective action has an adverse effect on the next phase of the business cycle. For example, attempts to increase the money supply in a recession, because of the lag in effects, winds up as an increase after recovery and at a time of rising prices. Also, attempts to reduce the expansion of the money supply in times of inflation, because of the lag, worsens the situation during the recession which always, thus far, has following the boom.

Milton Firedman, and some other monetarists, have advocated putting the system on "automatic pilot," to remove errors in running the ship. This approach would require that reasonable growth wind up as an increase after recovery and at a time of resource availability, **et cetera**. Should the economy be able to sustain a 3% annual growth rate, for example, then the money supply should be automatically increased by 3%, not by say 1% or 10% in accordance with discretionary monetary policy as is now the case. It has been said by some wag, that the Board has followed "the straight and narrow path between right and wrong." Certainly, the record has not been impressive. Until recently, even though we were experiencing constantly worsening inflation, each report would show an increase in the monetary supply far in excess of the increase in GNP. Although, since October there has been restraint, there are signs currently that the same old story is about to repeat itself and the money supply will begin to rapidly expand again. At this point, the writer would disagree with the Assembly, in its opposition to "mechanistic rules" relative to monetary policy. Milton Friedman seems to have a better solution for achieving porice stability.

As a fourth point the Assembly Report emphasized that while monetary and fiscal restraint are needed, restraining demand **alone** would do much harm in terms of increasing unemployment, and would do little to curb inflation. This seems logical. However, the writer feels that reducing demand would, in fact, reduce inflation, although at great cost in terms of suffering.

The fifth recommendation in the Report concerns the need for increased productivity, both in terms of reducing inflation and increasing stability of the economy. This recommendation included no suggestions relative to the means of achieving this extremely important objective. Much has been written concerning this problem in previous "Dean's Corner" articles.

The sixth recommendation stated that most of the participants in the Assembly strongly favored tax reductions to improve the supply side of the economy. That is, the tax structure should favor savings and investments over consumption. In a recent column the writer expressed the opinion that we have too long now been eating our "seed corn." Our tax structure has obviously favored the spender over the saver, in such ways as taxing interest incomes on savings but allowing "spenders" to deduct interest payments on loans made to support spending. This recommendation included several suggestions for a tax structure which would encourage saving and investment, and yet the Assembly still wished to keep the progressive income tax. As a practical measure the writer agrees that a progressive income tax is probably necessary. However, it rankles one no end to see a tax structure which potently punishes achievers, and must, therefore, tend to stifle initiative. This seems to be in opposition to all that our system stands for.

Some of the means suggested to improve the tax structure included reducing personal and corporate tax rates, an increased availability of tax-deferral plans for savers of modest means, further reductions in capital gains taxation (the writer would say that capital gains taxation on all except speculative investments in land, etc. should be eliminated), permitting deferral of taxation on reinvested dividends, permitting larger contributions to pension plans and making it possible to more easily recover capital costs in order to strengthen new investment in plant and equipment (this is the only way to improve productivity). All of these make good sense.

The seventh recommendation dealt with the need to maintain equity in the tax structure as the previous changes are being made. Specific suggestions involved indexation of income tax to prevent "tax-bracket creep" (the paying of a higher rate on essentially the same real income), a reduction in social security taxes and a negative income tax to "benefit those so low in income as to pay no taxes." The writer would advocate that if social security is to be continued, the tax rate should be adequate to support it. However, Congress should stop raiding the system by making it part of the dole. As for a negative income tax, whose fault is it that the wage earners are unable to contribute enough to command a higher income? In most cases tax payers are certainly not the cause. So, why should they be punished? On the other hand, it certainly makes some sense to supplement the income of those who are trying to support themselves than to simply dole the tax payers' funds out to the indigent.

Recommendations eight and nine concerned the energy problem which is hard upon us. The OPEC cartel in its unconscionable rigging of petroleum prices has contributed heavily to both the inflation and slow economic growth of the West. In the years ahead this continuous gauging will "entail considerable hardship and severely strain national unity," according to the Report. The usual strategy for combatting the problem was offered by the Assembly, with a clear statement of the need for a well defined energy policy deserving high presidential priority. The Assembly felt that if the public were properly informed as to the real nature of the problem the inevitable price increases and other sacrifices would be better endured.

The tenth recommendation touched on the international monetary problem and particularly the need for stability of exchange rates. With the "floating" of the dollar in March of 1973 international monetary instability became the established pattern. Irrational flights from one currency to another have exaggerated the problem, and monetary stability, so badly needed, is a thing of the past. Prior to 1973, the dollar was as good as gold, and in fact was redeemable in gold by foreign governments and central banks at the official price of $35 per ounce until Mr. Nixon raised it to $38 and then to $42.20. The degree of confusion which resulted from the abandonment of the discipline of hard money is evident in the wild girations int he price of gold in recent times. A solution to these problems was also placed high on the list of presidential priorities.

The eleventh recommendation stressed the need for the U. S. to remain competitive in world markets. This, of course, will require an increase in productivity. The Assembly warned against a retreat to protectionism.

The twelfth topic emphasized the need for encouraging agricultural output, reducing import restrictions and eliminating counter productive federal regulations. This recommendation also pointed out the need for government, industry and labor to work together to increase productivity.

The thirteenth returned to the problem of inflation. The group was opposed to federal controls on prices, wages, dividends, interest and rents. Opposition was also expressed to the concept of using the taxing mechanism to encourage restraint in wage demands and price increases. In short, it appeared that the group had little to offer in terms of solutions beyond that expressed in the first recommendation. As indicated in the Report this was the hardest issue the group faced.

It is perhaps the hardest issue we all face, because the causes of inflation are numerous and complex. Also, the solutions to these problems require sacrifices which few seem willing to make. Only a strong, capable and creditable leadership which can unite the diverse interests groups constituting our society can find solutions to the problems. Our job, meanwhile, is to find this type of leadership.

—**Gaines M. Rogers, Dean**

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Edinburg **ACTIVE APPAREL** Knit and Woven Tops	125
Tupelo **SOUTHERN ALUMINUM PRODUCTS, INC.** Energy Conservation Equipment	12
EXPANDED	
Aberdeen **AMERICAN COLLOID** Herbex Liquid Additive	10

State Tree of Mississippi

In 1935, the Director of Forestry started a movement by which to select a State Tree for Mississippi, to be selected by nomination and election by the school children of the State. Four nominations were made—the magnolia, oak, pine, and dogwood. The magnolia received by far the largest majority overall. On April 1, 1938, the Mississippi Legislature officially designated the magnolia as the State Tree. Chapter 365, Laws of Mississippi of 1938.

Source: "Souvenir of Mississippi" booklet.

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	June 1980	May 1980	June 1979
Retail Sales	174.1	165.4	189.9
Electric Sales	203.4	198.9	209.2
Telephones in Service	220.9	223.6	215,5
Gasoline Gallonage	147.1	148.5	134.8
Loans of Savings & Loan Institutions	86.0	65.8	280.7

Tourist Briefs

Grand Gulf Military State Park

Port Gibson, Mississippi

Museum and Visitors Center, Grand Gulf State Park, built with 40,000 hand-made bricks, over 100 years old.

Grand Gulf Military State Park, located near the site of the extinct river town, Grand Gulf, in Claiborne County was the scene of considerable military activity during the Federal campaign to capture Vicksburg, approximately twenty miles to the north.

In late May, 1862, the cannoneers of the Brookhaven Light Artillery,commanded by Captain James A. Hoskins, reached Grand Gulf. Hoskins had his gunners emplace and mask their four 6-pounders on the bluffs behind the village. Their task was to harass the Federal fleet commanded by Flag Officer Commodore David G. Farragut. On the morning of May 26, 1862, the Confederate artillerists wisely let three warships pass undisturbed, but as the unarmed transports drew abreast of the guns, the four 6-pounders roared into action, scoring a number of hits on the **Laurel Hill**. Before the warships could get into a position to return the fire, the flying battery was gone.

Captain Thomas T. Craven, commander of the warship, **Brooklyn**, determined to teach the Confederates a lesson by bombarding the town of Grand Gulf, whose citizens claimed that the battery was there without their consent.

Captain Craven, who was intent on burning the town, decided to confer with Brigadier General Thomas Williams. At this conference, it was agreed that the town would be spared, but that the Federal forces would remain until the next day and levy a forced contribution of cattle, pigs, poultry and wood upon the populace.

Under the cover of darkness on the night of June 8, 1862, the Confederates moved a number of 6 and 12-pounders into position on the ridge behind Grand Gulf. The next morning the crews of these guns struck the **Wissahickon** and **Itasca**, while these vessels were passing the batteries.

On June 24, 1862, an attempt was made by the Union forces to get into the rear of Grand Gulf by way of Bayou Pierre, which was blocked by a raft across the bayou about six miles below the Bayou Pierre railroad bridge. The ships had to back down the bayou to Colonel Barry's plantation, where a wagon road led to Grand Gulf four miles to the northeast.

As the task force approached the Confederate encampment near the railroad, the Federals sighted a locomotive and a freight car approaching from the direction of Port Gibson. On the car, protected by bales of cotton, the versatile Brookhaven Artillery had mounted one of their field pieces. A brief exchange of fire ensured, before the Confederates backed their train from the scene. This may well have been the first armored train employed in America.

After searching the bluffs behind Grand Gulf in vain for the Confederates, Colonel Halbert E. Paine's troops marched into the town of Grand Gulf, where they rendezvoused with the Federal transports. Before the troops embarked, they set fire to the town of Grand Gulf.

By the use of flying batteries, the Confederates were so mobile that it was hard for the Union troops to put a stop to their fortifying the bluffs of Grand Gulf. This continued harassment forced Farragut to start convoying his unarmed ships.

In March of 1863, the Confederate fortifications were strengthened and the armament was increased by the addition of Wade's and Guibor's Missouri Batteries under the command of Colonel William Wade, chief of artillery for General John S. Bowen. Bowen had some 2,500 infantry to man the extensive new rifle pits.

In April, 1863, General Ulysses S. Grant decided to alter his Vicksburg strategy by moving his troops down the Mississippi River; and, on April 29, 1863, the Federals launched a determined assault on Grand Gulf. The Confederates made a vigorous reply to the Union attack with their eight heavy fieldpieces. For six and a half hours, the two forts were shelled by the gunboats. Realizing how capable the Confederate batteries were at withstanding the assault, the gunboats were signaled to withdraw. General Grant, who witnessed the encounter on board a tug in the Mississippi River, decided against trying to run the unarmed transports, loaded to the gunwales with men, pass the Confederate batteries. Instead, Grant executed his alternate plan of disembarking his men and marching them down the Louisiana side of the river to DeShroon's (Disharoon's) plantation about three miles down the river.

Despite the estimated more than 2,500 heavy projectiles fired into the Confederate forts, there was little extensive damage. The Confederates suffered three dead, including Colonel Wade, and eighteen wounded, whereas, Union losses totaled nineteen dead and fifty-seven wounded. The **Benton** was rendered inactive by a shot through her control house from Fort Cobun. The forts with thirteen guns had held off seven Federal gunboats. The ships of this squadron amassed eighty-one guns, many of which were 11-inch Dahlgrens.

The defeat of Bowen's small army in the engagements west of Port Gibson on May 1, 1863, made the fortifications at Grand Gulf untenable, and the Confederates decided to spike the guns, destroy the ammunition and abandon the works. Grand Gulf was then occupied by Union forces, who used the site as a temporary base of supplies.

In 1958, the Mississippi Legislature created the Grand Gulf Military Park Commission to purchase land and develop the Grand Gulf site. Dedication ceremonies for the Grand Gulf Military State Park were held April 7, 1968.

Source, Dept. of Mississippi Archives and History.

State Flag of Mississippi

Adoption of Mississippi State Flag

The committee to design a State Flag and Coat-of Arms was appointed by legislative action February 7, 1894, and provided that the flag reported by the committee should become the official flag. The committee recommended for the flag "one with width two-thirds of its length; with the union square, in width two-thirds of the width of the flag; the ground of the union to be red and a broad blue saltier thereon, bordered with white and emblazoned with thirteen mullets or five-pointed stars, corresponding with the number of the original States of the Union; the field to be divided into three bars of equal width, the upper one blue, the center one white, and the lower one extending the whole length of the flag, red—the national colors; the staff surmounted with a spearhead and a battle-axe below; the flag to be fringed with gold, and the staff gilded with gold."

Source: "Souvenir of Mississippi" booklet.

STATE ECONOMIC INDICATORS

Indicator	June 1980[10]	May 1980[11]	June 1979[11]	Per Cent Change One Month Ago[12]	Per Cent Change One Year Ago[12]
EMPLOYMENT, EARNINGS AND HOURS[1]					
Total Employment (000's)	1,040,800	1,032,500	1,010,300	0.8	3.0
Non-Ag Employment	820,200	830,300	850,100	−1.2	−3.5
Mining	10,100	10,000	9,700	1.0	4.1
Contract Construction	45,300	44,400	49,000	2.0	−7.6
Manufacturing	216,600	219,300	240,500	−1.2	−9.9
Transportation and Public Utilities	42,100	41,700	41,500	1.0	1.5
Wholesale and Retail Trade	162,000	162,100	164,000	−0.1	−1.2
Finance, Insurance and Real Estate	33,200	33,100	33,200	0.3	0.0
Service	120,500	121,100	120,200	−0.5	0.3
Government	190,200	198,700	191,900	−4.3	−0.9
Unemployment Rate (Per Cent Labor Force)	8.6	6.9	6.1	——	——
Average Weekly Earnings in Manufacturing	207.05	205.06	199.08	1.0	4.0
Average Hourly Earnings in Manufacturing	5.35	5.34	4.94	0.2	8.3
Average Weekly Hours in Manufacturing	38.7	38.4	40.3	0.8	−4.0
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[2]	2,915	3,036	3,024	−4.0	−3.6
Gasoline delivered to Dealers (gals.)[3]	116,431	118,805	109,871	−2.0	6.0
Dairy Production					
Milk (lbs.)[4]	72,000	75,000	72,000	−4.0	0.0
Egg Production[4]	129,000	133,000	134,000	−3.0	−3.7
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations[5]	12,000	9,900	35,700	29.3	−64.2
Construction Loans	1,600	1,200	3,700	33.3	−56.8
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH)[6]	1,944,820	1,599,287	1,960,972	21.6	− 0.8
Telephones in Service[7]	1,465,410	1,460,974	1,430,004	− 1.2	2.5
RETAIL SALES TAX COLLECTIONS[8]	1,213,179	1,226,416	1,212,826	−1.1	0.03

Indicator	May 1980	April 1980	May 1979	Per Cent Change One Month Ago	Per Cent Change One Year Ago
AGRICULTURE (000's)[9]					
Total Cash Receipts from Farm Marketings	103,599	92,812	134,384	11.6	−22.9
Cash Receipts from Marketing Livestock	74,222	72,609	102,313	2.2	−27.5
Cash Receipts from Marketing Crops	29,377	20,203	32,071	45.4	− 8.4

[1] Mississippi Employment Security Commission

[2] State Oil and Gas Board for April

[3] Mississippi Motor Vehicle Comptroller

[4] Mississippi Crop and Livestock Reporting Service

[5] Federal Home Loan Bank of Little Rock

[6] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority

[7] South Central Bell Telephone Company

[8] Mississippi Tax Commission

[9] U. S. Department of Agriculture

[10] Preliminary

[11] Revised

[12] Percent change calculated with revised figures; not comparable with previously published data.

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago
Aberdeen	—33.2	— 5.2	8,169	—0.2	4.2	38,228	— 3.2	1.2	104,754	91,600	452,800
Baldwyn	— 0.9	— 2.6	4,681	—0.1	4.7	20,048	12.7	2.4	——	——	——
Batesville	——	——	8,695	0.2	4.5	51,501	2.0	8.9	299,000	70,000	56,000
Bay Springs	——	——	——	——	——	24,832	13.3	23.9	——	——	——
Bay St. Louis	——	——	13,377	0.4	6.4	31,499	—13.5	—20.6	100,150	102,395	286,290
Belmont	— 0.6	—12.0	2,270	0.8	6.2	8,886	6.7	0.4	——	——	——
Belzoni	——	——	4,947	0.8	6.8	24,812	1.3	12.7	13,500	16,119	18,200
Biloxi	——	——	45,251	—0.2	2.1	241,398	4.5	3.1	2,106,336	758,328	1,071,057
Brandon	——	——	11,668	0.1	0.2	27,651	20.1	3.6	636,985	178,500	349,700
Brookhaven	——	——	15,854	1.2	1.7	97,287	— 4.1	3.7	——	——	——
Brooksville	— 1.1	11.0	1,344	0.2	4.4	2,849	23.8	— 5.4	——	——	——
Canton	——	——	10,748	0.3	4.2	57,570	— 5.6	— 3.7	123,400	110,876	80,500
Carthage	——	——	7,500	0.3	5.8	34,199	— 3.4	— 1.1	3,500	82,700	39,500
Charleston	— 3.6	2.9	4,111	—0.1	2.5	19,247	42.0	20.7	——	——	——
Clarksdale	——	——	20,934	—0.1	3.6	105,344	— 1.2	5.8	445,300	114,558	299,000
Cleveland	——	——	13,908	0.2	3.1	87,985	— 8.7	3.6	——	——	——
Collins	— 9.3	— 2.3	4,649	0.2	3.2	36,981	5.1	61.6	——	——	——
Columbia	——	——	15,701	0.2	4.1	77,087	10.5	22.4	——	——	——
Columbus	——	16.6	33,075	0.1	2.6	192,248	— 1.3	2.4	416,405	423,024	3,949,030
Corinth	4.4	14.6	20,710	0.1	4.2	104,000	— 0.9	5.8	120,000	336,200	——
Crystal Springs	——	——	5,854	—0.2	4.3	23,883	1.1	—15.4	56,800	104,500	46,896
Drew	——	——	2,709	0.4	3.6	9,771	—30.6	— 1.2	1,300,000	——	——
Edwards	0.2	1.3	1,670	0.9	5.4	4,536	— 3.4	32.9	——	——	——
Ellisville	15.4	71.4	3,863	0.1	6.3	14,730	—47.7	12.9	——	——	——
Eupora	—20.0	—10.0	4,413	0.2	4.3	16,688	7.3	5.9	——	——	——
Fayette	1.7	0.9	3,325	0.0	5.3	8,243	—10.8	11.1	——	——	——
Forest	——	——	5,110	0.1	4.8	50,635	0.5	12.4	46,000	——	——
Greenville	6.1	9.3	37,349	0.1	4.6	213,301	—12.5	— 4.0	——	——	——
Greenwood	——	——	24,044	0.2	3.0	145,616	—12.7	8.7	88,000	148,000	189,000
Grenada	——	——	14,293	0.3	4.5	78,466	— 3.5	11.1	91,000	778,800	204,000
Gulfport	0.0	— 0.7	61,171	0.6	4.3	236,454	— 0.3	3.9	703,763	979,388	——
Hattiesburg	——	——	59,085	0.3	5.5	321,726	3.1	11.8	1,358,813	1,962,859	1,196,912
Hernando	——	——	7,182	0.4	6.8	22,367	9.7	6.5	2,000	72,200	31,600
Hollandale	— 5.6	11.8	3,396	0.1	6.2	11,586	— 8.2	9.7	60,735	5,750	5,000
Holly Springs	——	——	7,340	—0.1	3.1	37,705	2.8	11.4	36,000	——	47,300
Houston	——	——	5,622	0.1	3.0	23,668	— 2.4	—13.5	91,936	88,800	86,550
Indianola	0.3	10.7	7,813	—0.1	4.5	58,411	4.5	11.1	——	——	——
Iuka	——	——	5,592	1.2	10.4	27,331	15.7	32.2	——	——	——
Jackson	— 2.4	13.6	224,851	—0.1	3.5	1,324,447	—14.7	— 0.4	7,173,611	5,899,404	12,023,272
Kosciusko	— 1.1	6.5	9,468	—1.1	1.6	45,931	— 7.8	— 4.9	165,000	50,500	89,220
Laurel	— 8.1	4.5	34,380	0.1	4.5	571,583	24.0	176.6	1,916,617	4,203,199	860,613
Leland	——	——	5,200	1.8	7.6	17,920	—14.3	—13.4	22,000	183,550	132,795
Lexington	——	——	4,774	0.0	3.7	19,597	— 1.7	19.4	——	——	——
Louisville	0.7	7.8	10,662	0.1	3.6	54,308	27.1	20.1	45,545	72,500	602,400
Lucedale	——	——	8,331	0.3	5.8	35,341	8.0	21.9	78,000	73,500	71,500
Lumberton	——	——	2,923	0.2	2.8	7,474	6.0	5.8	——	——	——
Macon	——	— 4.9	3,733	0.3	3.2	16,340	6.9	17.5	——	——	——
Magee	——	——	5,315	0.2	3.1	40,669	5.3	7.0	——	——	——
Magnolia	— 0.5	0.2	4,201	0.2	3.5	8,140	— 5.7	—11.9	——	——	——
Marks	— 2.3	27.1	5,550	0.0	5.2	17,079	—11.2	18.2	——	——	——
McComb	——	——	19,766	0.0	4.2	106,581	— 7.9	5.0	259,600	531,575	786,800
Meadville	— 5.6	2.1	——	——	——	4,673	6.3	— 6.5	32,700	——	——
Mendenhall	13.0	——	6,567	0.6	4.9	18,322	5.5	—17.5	44,000	500	27,750
Meridian	——	——	47,961	—0.3	3.0	318,956	— 0.5	1.8	342,627	1,171,373	1,561,103
Monticello	——	——	4,859	0.3	6.6	18,278	15.2	15.3	2,500	36,200	41,000
Morton	——	——	3,496	0.1	2.9	16,224	— 9.0	—11.2	——	——	——
Moss Point	— 2.6	9.5	16,878	0.1	2.8	38,618	—12.1	—15.1	299,926	142,218	161,660
Natchez	——	——	29,546	0.1	4.5	194,490	— 2.6	15.8	202,489	219,338	141,657
New Albany	51.0	——	11,196	0.2	4.1	50,611	— 7.6	8.9	171,960	891,681	332,797
Newton	——	——	4,063	0.5	3.1	21,350	— 3.5	— 0.5	70,200	56,507	——
Ocean Springs	——	— 9.4	15,759	0.1	3.2	67,487	2.7	15.7	237,300	226,414	459,971
Okolona	— 2.4	— 9.9	3,423	0.2	3.3	13,170	—10.9	6.7	——	——	——
Oxford	——	——	20,885	1.9	4.7	70,759	— 9.8	4.6	547,050	137,000	560,416
Pascagoula	——	——	34,811	—0.3	2.7	204,506	3.2	1.2	553,250	1,208,459	352,910
Pass Christian	——	——	5,563	0.5	2.9	12,033	—23.6	8.4	55,645	1,551,720	27,840
Philadelphia	——	——	11,479	0.3	3.5	44,925	3.7	— 1.0	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago	Current Month June	Month Ago	Year Ago
Picayune	——	——	15,185	0.5	4.7	71,141	4.6	5.4	225,000	25,351	213,066
Pontotoc	——	——	9,322	0.3	2.7	34,736	2.1	−5.1	——	——	——
Poplarville	——	——	4,129	0.4	2.5	13,006	7.4	−18.1	109,000	——	86,000
Port Gibson	−12.2	−8.4	5,777	−0.1	6.6	13,559	−12.4	19.5	——	——	——
Prentiss	——	46.3	——	——	——	19,710	21.8	12.0	70,000	59,295	59,000
Quitman	8.7	6.1	4,873	−0.2	3.9	23,334	−0.8	−1.9	——	——	——
Raymond	−2.8	5.0	2,971	0.2	7.1	8,766	4.1	−3.4	——	——	——
Richton	——	——	1,988	−0.5	4.7	11,607	22.2	11.5	——	1,200	28,580
Rosedale	−9.2	−5.2	1,626	−0.4	1.3	7,525	−3.5	23.1	——	——	163,000
Ruleville	1.2	——	1,987	−0.2	0.5	11,675	24.4	18.6	119,475	119,875	13,700
Sardis	——	——	3,526	0.5	3.7	16,706	−0.5	20.8	28,100	2,000	2,000
Senatobia	1.5	10.7	6,660	−1.4	4.5	40,967	5.1	13.0	63,800	9,800	122,000
Shelby	−6.1	60.3	1,670	−0.1	−1.7	11,140	13.7	6.1	——	——	——
Starkville	——	——	22,537	3.0	−2.9	77,715	−8.7	0.7	266,000	379,000	1,371,000
Summit	——	——	1,635	0.3	4.3	8,537	1.6	−9.8	——	——	——
Taylorsville	−10.1	−6.9	1,778	0.4	3.2	13,693	31.0	25.7	——	——	——
Tchula	——	——	2,024	0.0	1.9	3,845	−13.3	−13.8	——	——	——
Tunica	——	——	4,345	0.5	5.0	17,754	7.6	11.2	——	——	——
Tupelo	——	——	37,482	0.2	4.0	278,450	5.3	11.4	455,972	397,737	——
Union	0.7	7.3	2,740	−0.2	2.9	14,845	−16.2	7.8	——	——	——
Utica	−2.1	——	3,009	−0.2	1.4	8,377	8.3	13.1	——	——	——
Vicksburg	−4.8	3.4	38,914	0.3	5.1	207,310	−3.4	23.3	209,750	126,350	330,144
Walnut Grove	——	——	1,028	−0.1	5.1	1,323	−2.1	−14.7	——	——	——
Water Valley	——	——	4,047	0.2	6.6	21,321	1.2	12.7	——	——	——
Waynesboro	——	6.4	7,509	0.2	6.2	60,155	−4.7	24.2	58,945	4,000	36,000
West Point	——	——	12,337	0.1	5.2	47,370	−8.7	7.1	283,525	164,750	1,269,000
Wiggins	15.9	——	6,189	−0.1	4.6	22,874	23.0	18.1	——	——	——
Winona	——	−4.9	5,024	0.2	3.5	32,350	11.4	13.6	48,000	——	39,900
Yazoo City	3.5	9.8	12,344	0.2	4.5	59,211	−14.0	5.0	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON **[Hinds and Rankin Counties]**	June 1980[1]	May 1980	June 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	157,400	154,600	151,400	1.8	4.0
Unemployed Persons	8,800	7,600	6,200	15.8	41.9
Per Cent of Labor Force	5.6	4.9	4.1	——	——
Employed Persons	148,600	147,000	145,200	1.1	2.3
Non-Ag Wage & Salaried	128,600	126,800	125,000	1.4	2.9
Manufacturing	18,100	17,900	18,300	1.1	1.1
TELEPHONES IN SERVICE	244,169	244,271	236,071	0.04	3.4
CITY SALES TAX COLLECTIONS	1,373,777	1,595,691	1,376,050	−13.9	−0.2

BILOXI-GULFPORT **[Hancock, Harrison and Stone Counties]**	June 1980[1]	May 1980	June 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	66,220	64,530	64,000	2.6	3.5
Unemployed Persons	4,220	3,550	4,100	18.9	2.9
Per Cent of Labor Force	6.4	5.5	6.4	——	——
Employed Persons	62,000	60,980	59,900	1.7	3.5
Non-Ag Wage & Salaried	52,860	51,890	50,780	1.9	4.1
Manufacturing	8,620	8,490	8,610	1.5	0.1
TELEPHONES IN SERVICE	111,985	111,701	108,363	0.3	3.3
CITY SALES TAX COLLECTIONS	489,885	483,805	452,195	1.3	8.3

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[1] Preliminary

Timber Severence Tax Collections for Mississippi Counties

Source: Mississippi Tax Commission
Computations made by Division of Business Research

County	1978	% of State	% of Change	1979	% of State	% of Change
Adams	14,880	0.70	− 4.52	23,708	1.05	59.33
Alcorn	9,637	0.45	61.0	12,083	0.54	25.38
Amite	45,689	2.14	−16.58	54,070	2.40	18.34
Attala	47,495	2.23	31.57	56,993	2.53	20.00
Benton	11,522	0.54	1.70	9,614	0.43	−16.56
Bolivar	6,149	0.29	181.03	3,872	0.17	−37.03
Calhoun	21,743	1.02	19.67	25,034	1.11	15.14
Carroll	15,616	0.73	40.23	15,095	0.67	− 3.34
Chickasaw	12,018	0.56	10.32	12,443	0.55	3.54
Choctaw	24,247	1.14	−10.30	31,640	1.41	30.49
Claiborne	27,400	1.29	23.99	22,598	1.00	−17.53
Clarke	61,701	2.89	7.84	62,878	2.80	1.91
Clay	11,600	0.54	79.10	6,729	0.30	−41.99
Coahoma	1,010	0.05	−73.50	4,447	0.20	340.30
Copiah	50,760	2.38	18.51	49,941	2.22	− 1.61
Covington	24,460	1.15	0.77	23,348	1.04	− 4.55
DeSoto	722	0.03	253.92	643	0.03	−10.94
Forrest	490.24	2.30	37.82	57,919	2.58	18.14
Franklin	57,994	2.72	20.37	47,590	2.12	−17.94
George	25,173	1.18	− 3.40	37,571	1.67	49.25
Greene	56,673	2.66	3.28	68,646	3.05	21.13
Grenada	9,490	0.45	− 2.28	9,687	0.43	2.08
Hancock	10,825	0.51	−19.02	14,300	0.64	32.10
Harrison	29,472	1.38	23.70	27,889	1.24	− 5.37
Hinds	16,337	0.77	− 5.00	15,946	0.71	− 2.39
Holmes	22,871	1.07	31.00	21,836	0.97	− 4.53
Humphreys	726	0.03	−18.61	1,557	0.07	114.46
Issaquena	8,212	0.39	−31.10	16,226	0.72	97.59
Itawamba	21,024	0.99	2.61	25,797	1.15	22.70
Jackson	37,184	1.74	78.59	56,123	2.50	50.93
Jasper	72,198	3.39	19.90	69,119	3.08	− 4.26
Jefferson	24,618	1.15	5.94	23,311	1.04	− 5.31
Jeff Davis	18,451	0.87	8.15	25,850	1.15	40.10
Jones	53,740	2.52	41.50	51,647	2.30	− 3.89
Kemper	60,407	2.83	5.65	62,605	2.78	3.64
Lafayette	19,708	0.92	9.16	26,380	1.17	33.85
Lamar	28,295	1.33	−26.43	36,876	1.64	30.33
Lauderdale	61,659	2.89	8.79	65,061	2.89	5.52
Lawrence	32,147	1.51	4.84	34,192	1.52	6.36
Leake	38,002	1.78	12.55	41,147	1.83	8.27
Lee	4,957	0.23	74.91	3,583	0.16	−27.72
LeFlore	2,195	0.10	250.08	2,731	0.12	24.42
Lincoln	43,658	2.05	− 3.37	47,190	2.10	8.09
Lowndes	5,430	0.25	− 9.88	3,466	0.15	−36.17
Madison	23,552	1.10	37.14	24,163	1.07	2.59
Marion	28,560	1.34	3.21	26,917	1.20	− 5.75
Marshall	7,082	0.33	33.80	8,729	0.39	1.04
Monroe	24,586	1.15	− 1.49	23,349	1.04	− 5.03
Montgomery	18,937	0.89	16.17	15,948	0.71	−15.78
Neshoba	48,500	2.28	2.61	46,971	2.09	− 3.15
Newton	59,099	1.37	− 4.66	49,840	2.22	−15.67
Noxubee	25,456	1.24	17.83	30,562	1.36	20.06
Oktibbeha	19,184	0.90	3.80	17,785	0.79	− 7.29
Panola	6,920	0.32	19.48	5,531	0.25	−20.07
Pearl River	41,224	1.93	17.12	42,976	1.91	4.25
Percy	44,398	2.08	2.41	58,265	2.59	31.23
Pike	37,936	0.18	− 5.27	38,649	1.72	1.88
Pontotoc	12,277	0.58	15.56	16,905	0.75	37.70
Prentiss	14,315	0.67	55.72	12,283	0.55	−14.19
Quitman	293	0.01	−95.92	507	0.02	73.04
Rankin	51,532	2.42	28.61	46,679	2.08	− 9.42
Scott	49,952	2.34	6.03	58,402	2.60	16.92
Sharkey	3,205	0.15	100.56	2,897	0.13	− 9.61
Simpson	44,812	2.10	14.29	43,701	1.94	− 2.48
Smith	43,442	2.04	9.11	40,546	1.80	− 6.67
Stone	53,143	2.49	0.42	39,652	1.76	−25.39
Sunflower	789	0.04	592.11	718	0.03	− 9.00
Tallahatchie	2,811	0.13	100.64	1,926	0.09	−31.48
Tate	317	0.01	−55.16	819	0.04	158.36
Tippah	12,261	0.58	33.05	12,368	0.55	0.87
Tishomingo	9,152	0.43	− 9.56	16,498	0.73	80.27
Tunica	9,453	0.44	279.64	944	0.04	−90.01
Union	5,118	0.24	− 7.83	7,535	0.34	47.23
Walthall	21,120	0.99	6.59	20,643	0.92	− 2.26
Warren	26,459	1.24	6.50	24,421	1.09	− 7.70
Washington	1,854	0.09	−73.14	3,774	0.17	103.56
Wayne	62,029	0.91	1.37	67,814	3.02	9.33
Webster	17,166	0.81	−17.50	21,845	0.97	27.26
Wilkinson	43,888	2.06	− 5.10	44,900	2.00	2.31
Winston	41,211	1.93	0.87	42,666	1.90	3.53
Yalobusha	9,515	0.45	26.14	10,175	0.45	6.94
Yazoo	12,043	0.56	3.54	11,151	0.50	− 7.41
Other						
State Total	2,131,711		7.04	2,2[illegible]8,740		5.49

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Dr. Carole Bartlett Cheatham is Associate Professor of Accounting at Mississippi State University. She received her Ph.D. from the University of Arkansas. Dr. Cheatham is a member of American Institute of Certified Public Accountants, American Woman's Society of Certified Public Accountants, National Accountants Association, and American Accounting Association.

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How To Deal With Risk In The Capital Budgeting Decision

By

Dr. Carole B. Cheatham

On a bright sunny morning in June two managers are reviewing proposals to purchase equipment to expand production in their respective plants. Albert Allen of Ajax Corporation is reviewing a proposal to spend $120,000 to produce Product A, a product that his company has successfully produced and marketed for ten years and for which there appears to be a continued market at present prices. Bernie Barton of Benson Company is reviewing a proposal to spend $120,000 on equipment to produce Product B, a new product that has been test marketed but has not yet gone into full production. Reviewing the cash flows and the expected internal rate of return and applying his business judgment, Allen decides to okay the equipment for Product A. Also reviewing the cash flows and the expected internal rate of return and applying his business judgment (or hunch or intuition), Barton decides to cancel the purchasing of equipment to produce Product B. At lunch he tells an associate that, although the rate of return looked good, the project was too risky.

Rather than use hunch or intuition, how could Barton have better evaluated the risk factor? Could he have refined his judgment by quantifying it in some way? The purpose of this article is to discuss in nontechnical fashion some of the ways to deal with risk in the capital budgeting decision. These ways include informal methods, sensitivity analysis, use of quantitative probability factors, use of decision trees, use of the coefficient of variation, use of cumulative probabilities, and Monte Carlo simulation.

Informal Methods

Barton used the most informal method of dealing with risk by just applying his hunch or intuition or business judgment. A step up from this method is intuitive ranking. In intuitive ranking the decision maker sits down with a list of proposals and ranks them according to risk. In order to use this method he or she must be considering several proposals.

Probably the most common way to deal with risk in the capital budgeting decision is to require higher profitability to compensate for risk. That higher profitability is stated in terms of whatever criterion for investment is used—a higher rate of return, a higher profitability index, a higher present value, a shorter payback period, etc. Adjusting the required profitability figure has an advantage in its simplicity. However, the problem with the method is how much to adjust. How much premium is required for "very risky" as opposed to "somewhat risky"?

Informal methods for dealing with risk in capital budgeting include use of subjective judgment, intuitive ranking, and requirement of higher-than-normal profitability. These methods all have an advantage in simplicity but involve a high degree of subjectivity.

Sensitivity Analysis

Another approach to evaluating risk is sensitivity analysis. In sensitivity analysis, one or more of the critical variables is manipulated to determine how poor performance would have to be to reject the project. For example, how low would cash inflows have to be before the project would not earn the required rate of return? Or how short would the life have to be for the project to earn a less-than-acceptable return? In the second phase of sensitivity analysis, the decision maker must then decide whether the critical variable could perform that poorly.

If Barton is considering a project that will cost $120,000 and will earn $20,000 a year for 14 years, his company will get a return of approximately 14%. If his company requires only a 10% return, the cash inflow could be as low as $16,300 and still earn 10%. (As obtained from a present value table, the present value factor at 10% for 14 years is 7.367 which is divided into $120,000 to get the minimum cash inflow.) Alternately, the company could earn $20,000 for only 9.6 years. (If $120,000 is divided by $20,000 the result is a present value factor of 6. This yields a 10% return between 9 and 10 years, or more accurately 9.6 years.) Or as another possibility the company could earn

$17,600 for 12 years to obtain a 10% return. (The present value factor for 10% for 12 years is 6.814 which is divided into $120,000 to get the minimum cash inflow.) Barton must next decided whether a cash inflow of less than $16,300 or a life of less than 9.6 years or some combination of a lesser cash inflow and shorter life resulting in a return of less than 10% is likely. If so, he will choose not to invest.

Sensitivity analysis is, in fact, a type of breakeven analysis. The decision maker computes the minimum cash inflow or the minimum life necessary to breakeven on the capital investment. Sensitivity analysis gives the decision maker the advantage of knowing the minimum performance necessary to achieve the desired goal. Subjectivity is not eliminated, however, because he or she must still decide whether the minimum performance can be achieved.

Quantitative Probability Factors

Another way to deal with risk in the capital budgeting decision is to assign quantitative probability factors to the cash inflow values. Perhaps Barton, as in the previous illustration, feels that $20,000 is the most likely cash inflow; but he thinks there is some probability that the inflow could be as high as $30,000 or as low as $10,000. His first step would be to assign probabilities to the various outcomes. Then Barton would compute a cash inflow that is a weighted average of the various possible inflows. His computations could look something like the following:

Possible Cash Inflow		Subjective Probability		Expected Cash Inflow
$10,000	×	.10	=	$ 1,000
20,000	×	.60	=	12,000
30,000	×	.30	=	9,000
				$22,000

Barton could then use the $22,000 expected cash inflow to compute the internal rate of return, payback period, present value, or whatever profitability measures he uses in capital budgeting analysis. If cash inflows are not uniform from year to year, he can do a separate calculation to get each year's expected cash inflow.

Barton, who is evaluating the returns from a new product, would use **subjective probabilities** which he assigns according to his business judgment. Another type of probabilities is **empirical probabilities** in which probabilities are computed from past experience as in computing a baseball player's batting average. Barton would not likely have enough information to use empirical probabilities. However, Allen, who is evaluating the profitability of a product which his company has marketed for sometime, could use empirical probabilities per se or could use empirical probabilities as a starting point in computing subjective probabilities. Perhaps he might feel that the product cycle for this particular product had peaked and now was in decline so his estimate of probabilities would be somewhat lower or more pessimistic than the empirical probabilities.

There are some problems with use of quantitative probabilities. For one thing, the expected value obtained is a strict monetary value with no provision for what an economist would call utility. Suppose a company were faced with a decision in which it could either lose $10,000,000 or make $20,000,000 with a 50% probability of either happening. Although the expected value is a $5,000,000 gain, the company may very well choose not to invest because they could not stand a $10,000,000 loss should it occur—departments would be shut down, employees would be laid off, and the stockholders would hang management in effigy.

The element of subjectivity has not been eliminated by use of quantitative probabilities. Either the probabilities are subjectively assigned or empirical probabilities are subjectively evaluated and perhaps modified. However, the decision maker does think through the various outcomes and does assign some quantitative values which should result in a better evaluation than "sort of risky" or "could possibly happen."

Decision Trees

An extension of the use of quantitative probabilities is the use of decision trees to analyze returns from more than one time period. Returning to Barton's decision in which the possible cash inflows were $10,000, $20,000, and $30,000 with probabilities of 10%, 60%, and 30% respectively, suppose these were the probabilities for the first year only. In the second (and final) year the product is marketed, the possible cash inflows are $30,000 or $40,000 with a 50% chance of either occurring. Further assume that the second year returns are entirely independent of the first year.

Although cash inflows could be used in this type analysis, it makes more sense to use present values (or net present values) of the cash inflows because each year must be weighed by a different present value factor. The resulting decision tree appears in Table 1. The present value of the cash inflows of each path is calculated assuming a 10% minimum desired rate of return, such as for the "top" path (10,000 x .909) + (30,000 x .826) = 33,870. The probability of each path equals the probability in Year 1 multiplied by the probability in Year 2. For example, the probability of the top path is 10% multiplied by 50% which is 5%. Multiplying the present value of the cash inflow for each path by the probability and totaling the results gives an expected present value of the cash inflows. This figure can then be utilized in the capital budgeting model to calculate net present value or the profitability index or whatever discounted cash flow measure is desired.

Coefficient of Variation

A further expansion of the use of probabilities to determine risk is the computation of the coefficient of variation. The coefficient of variation is found by dividing the standard deviation by the expected cash inflow. The standard deviation is a measure of the "spread outness" or the dispersion of a probability distribution. Thus, it is considered a good indication of the risk involved. When divided by the expected cash inflow, the dispersion is put in perspective in relation to the inflows.

Assume that Barton has three estimates of cash inflows depending on whether the economy is in a state of recession, a-normal period, or a boom period. These estimates are $10,000, $20,000, or $30,000 with probabilities of 25%, 50% and 25% respectively. Further assume that Barton feels he faces a whole range of continuous values rather than the discrete values of just $10,000, $20,000 or $30,000 and that the probability distribution takes on the symmetrical shape of a normal curve.

The standard deviation is calculated by finding the square root of the mean of the squared deviations from the expected value. The calculation for the standard deviation would be:

$$\sigma = [.25\,(10{,}000 - 20{,}000)^2 + .50\,(20{,}000 - 20{,}000)^2 + .25\,(30{,}000 - 20{,}000)^2]^{1/2} = 7{,}071$$

The expected value of the cash inflows is the $20,000 normal economy estimate or it can be calculated:

$$\bar{X} = [.25\,(10{,}000) + .50\,(20{,}000) + .25\,(30{,}000)] = 20{,}000$$

Dividing the standard deviation of $7,071 by the expected value of the cash inflows of $20,000 gives a coefficient of variation of .35.

The coefficient of variation can be used to compare risk for alternative investments. It can also be used to adjust the required rate of return on investments, a higher return being required for investments

TABLE 1

Year 1	Year 2	Present Value of Cash Inflows Discounted at 10%	Probability of Path	Expected Present Value of Cash In-flows
.10 10,000	.50 30,000	33,870	.05	1,694
	40,000	42,130	.05	2,106
.60 20,000	.50 30,000	42,960	.30	12,888
	.50 40,000	51,220	.30	15,366
.30 30,000	.50 30,000	52,050	.15	7,808
	.50 40,000	60,310	.15	9,046
			1.00	48,908

that have a higher coefficient of variation. When comparing investments of different amounts and lives, net present values should be used rather than the cash inflows used in this simplified illustration.

The coefficient of variation should not be interpreted as an overall index of the desirability of an investment. It would be possible for an investment to have probable cash inflows which are all higher than the previous illustration and still have the same coefficient of variation. For example, a potential investment in which there is a 25% probability of earning $100,000, and a 50% probability of earning $200,000, and a 25% probability of earning $300,000 also has a coefficient of variation of .35. The coefficient of variation by itself is an index of risk only and needs to be interpreted along with the expected cash inflow and other decision variables.

For some diversified investments the coefficient of variation may indicate a higher degree of risk than is actually involved. If a company usually sells one product line and it is contemplating an investment in a product line that generally sells when the usual line does not, it is spreading its risk rather than increasing it. The Buick dealer, for example, may decide to also sell Mazdas. Intuitively most businessmen know that this "don't put all your eggs in one basket" philosophy tends to decrease the overall risk to the company.

A further caution is in order in that the coefficient of variation figure is only as good as the input, in this case the estimates of probabilities and cash inflows. On the basis of the estimates given it was calculated that Barton's new Product B investment had a coefficient of variation of .35. It is entirely possible that the investment in Product A, the product that had been marketed for years, has a coefficient of variation of .35 of even higher computed from estimates based on years of experience. It is worth noting that there is a difference between risk and uncertainty. Although most writers lump these two factors together under the title of "risk," true risk involves a known probability distribution while uncertainty involves an unknown probability distribution. While both decisions involve uncertainty, the Product B decision involves more uncertainty than the Product A decision because there is no past history on which to base the estimates of the probability distribution.

Cumulative Probabilities

Continuing on with the assumption of cash inflows with a probability distribution approximating a normal curve, another technique that can be utilized is the use of cumulative probabilities. Cumulative probabilities are intuitively easy to grasp and a simple way to express risk in quantitative form. A statement such as "there is a 90% change that the cash inflow will be above $10,000" is a useful way to present the risk factor.

Utilizing the characteristics of a normal curve it can be said that there is a 34.1% probability that the cash inflow will be within one standard deviation of the mean on either side, a 47.7% probability that it will be within two standard deviations, and a 49.9% probability that it will be within three standard deviations. Using the example from the previous section, there is a 50% probability of achieving the mean or expected cash inflow of $20,000. The probability that the cash inflow will be at least $12,929 ($20,000 less one standard deviation of $7071) is 50% plus 34.1%, a total of 84.1%. There is a 97.7% probability (50% plus 47.7%) that the cash inflow will be at least $5,858 ($20,000 less two standard deviations.)

A useful way to apply cumulative probabilities is to find the probability of reaching the breakeven cash inflow as calculated by sensitivity analysis. In the section on sensitivity analysis it was determined that Benson Company breaks even on Product B if it earns $16,300 which is $3,700 below the expected cash inflow or .52 standard deviations. Using an appropriate table which shows the area under the normal curve, it can be determined that there is a 70% probability that the breakeven cash inflow will be reached.

Cumulative probabilities can also be stated when discrete cash inflows are assumed. Returning to the assumption that the cash inflow will be $10,000, $20,000 or $30,000 with probabilities of 10%, 60%, and 30% respectively, it can be said that there is a 90% probability that the cash inflow will be at least $20,000 which is found by summing the 30% probability that the inflow will be $30,000 and the 60% probability that the inflow will be $20,000.

Monte Carlo Simulation

At this point many decision makers may protest that they actually face a whole range of risks in connection with a new product—the sales levels, the labor costs, the raw material costs, the life of the equipment, etc., are all subject to risk. Monte Carlo simulation, which is usually done by computer, allows the decision maker to manipulate a whole group of variables at once.

(Continued on Page 9)

The Dean's Corner

It has been a long, hot and dry summer over much of the nation. This has brought into focus a serious problem which has been with us for several decades, the diminishing water supply upon which we are so dependable.

For some reason, which does not come to mind, the writer made a study of the U. S. water supply thirty or so years ago. At the time it appeared that the first basic resource to become depleted would be fresh water; although it was then believed that petroleum would soon follow. Few, if any, at that time would have predicted the reckless abandon with which we have squandered both.

A large area in the west, the High Plains area, including parts of eight states, is nearing the end of its underground water supply. This area includes a quarter of a million square miles, and is fed by the Ogallala Aquifer. The entire area sits atop a gravel and sand stratum containing water accumulated over millions of years, but which is being pumped out for irrigation at an infinitely faster rate than it is being replaced. An Associated Press article, entitled "Cattle Country May Be Going Dry," appearing in July stated, "An abundance of research predicts economic doom for the area." Studies have indicated that much of the area will return to the status of the "Great American Desert" shortly after the turn of the century.

With the opening of the area to irrigation just before World War II, farming shifted from dry land farming based upon wheat and maize to heavy water using crops, such as corn. This brought about a boom in the area, particularly cattle feed lots, and "parts of the High Plains became supplier to half the nation." (AP article previously referred to.) A recent extensive treatment of the problem appeared in the **Wall Street Journal** in the form of an article entitled "Running Dry" with a subcaption, "Rise in Food Prices Forecast." The article pointed out that "almost half the nation's beef cattle are fattened on high plains feedlots, (Sic) which were lured to the high plains by abundant feed."

The economy of a vast geographical area of the country as well as almost two million people is dependent upon the Ogallala Aquifer, and so, for that matter, is the remainder of the country. As we depend more and more on agricultural products to buy oil from the rapacious OPEC group, the thought of losing a considerable block of agricultural land looms omniously over us. Not only do we face the problem of higher food prices (and lower living standards) but the gasohol approach to the gasoline shortage seems less feasible, as well as our ability to meet the extortion demanded by OPEC.

Water is a resource the same as minerals, and "water experts say Ogallala water is being 'mined' as surely as any depletable mineral" (**Wall Street Journal** article). By the year 2000 (20 years hence) the use of irrigated land in this area will have fallen by about one-half, even with a more efficient use of the remaining water. This situation is simply another example of how the current generation has been "living highly" at the expense of future generations. The area should never have been employed to grow heavy water-using crops. A more responsible use of the aquifer would have stretched out the supply of water for a much longer period of time. In fact, in the **Wall Street Journal** article referred to, a Kansas farmer and member of a local water management board was quoted as saying, "We could have put controls on, and instead of lasting 40 years, the Ogallala would have lasted 80."

As serious as the Ogallala Aquifer area problem is, the fact that the situation is not unique to this part of the country. Water levels are falling in many sections of the country, some to such an extent that salt water is seeping into pure water aquifers. Even in Mississippi where the writer thought that no water shortages would occur for generations, problems are beginning to appear. In an AP article in late July in the **Jackson Clarion-Ledger** the following caption appeared: "Tupelo, Jackson Experiencing Low-Water Supply Problems." The director of the Land and Water Resources Division of the State Department of Natural Resources, Charles Branch, was quoted in the article as saying that in certain areas water was being consumed at a much more rapid rate than it is being replaced, and that "the ground water level is dropping 5 to 8 feet per year."

An extensive report (1½ inches thick) was released about a year and a half ago (December, 1978) by the U. S. Water Resources Council, entitled **The Nation's Water Resources, 1975-2000**. Volume I was in the form of a summary of the extensive report contained in Volume 2. According to the report, by 1985 there will be a total daily "withdrawal" of 306,397,000,000 gallons of fresh water per day, of which over one-half would be used by agriculture mostly in the form of irrigation. Unlike water used by cities and manufacturing, much of which can be recycled and fed back into streams, most water used in irrigation is lost by evaporation and plant transpiration.

Many areas of the nation are dependent upon aquifiers not only for direct use but to maintain stream flows. "Acquifers are recharged primarily by downward percolation of rain or snowmelt" [Report just cited]. And in a number of areas the recharge is less than the withdrawals. Such a situation is referred to as an "overdraft." Under normal conditions about ⅓ of the water in streamflows comes from acquifers, and "in years of below normal precipitation all streamflow during low stage may be ground water. Groundwater (acquifers) overdraft is substantial in some areas of the nation." [Report]

In fact, a chart in Volume 1 (p. 18) shows that the overdraft ranges from substantial to fairly low in a majority of the water resource regions in the nation. The average overdraft for the 18 regions in the continental U.S. was 25.7 percent. The term overdraft refers to "that part of ground-water withdrawals which exceeds recharge; sometimes referred to as ground-water mining." (**Nation's Water Resources**, Glossary of Terms.) The situation has become so bad that there are overdrafts in 12 of the 18 regions. The High Plains area (Texas-Oklahoma section) is currently experiencing an average overdraft of 12.5 billion gallons **per day**, "an amount about equal to the flow of the Colorado River." Surprisingly the Texas-Gulf Region shows an overdraft of 79%, or about 5.6 billion gallons per day. Mississippi is equally divided between regions 3 and 8. Region 3 (South Atlantic-Gulf Region) has a 6.2% overdraft (339 million gallons per day), and Region 8 (Lower Mississippi Region) has an 8.5% overdraft (412 million gallons per day).

In summary form the study identified several problems (Volume 1) associated with water resources. (Vol. 1 pages 3-4.)

Inadequate Surface Water Supply. All regions experience local problems in varying degrees. Of the approximately 100 subregions in the continental U.S., 17 have or will have in the relatively near future, serious problems of water shortages.

Overdraft of Ground Water. The serious shortage in the High Plains area has been discussed; 38 subregions have some degree of ground water shortage, some serious.

Pollution of Surface Water. Most regions are experiencing problems in the pollution of streams. It is paradoxical that the very streams we are completely dependent upon for our very existence are at the same time the most convenient method of waste disposal. This has been true since the dawn of civilization. Again, the largest percentage of waste and pollution comes from agriculture. The runoff from rain storms and melting snow in cities may clean the streets, buildings, automobiles, etc., but it also is a source of nearby stream pollution. Acid mine drainage is another pollutant. The writer recalls seeing beautiful streams in the gold mining area of the Rockies last fall, void of fish because of acid or other poisonous seepage from old mines. Of course, municipal and industrial waste is another source. The problem is concentrated in the East and Midwest, but pollution is at least a local problem in a dozen or so other areas. Vast sums are being spent by both state and federal governments to correct water pollution, but this unfortunately uses capital resources badly needed to improve productivity. Again, by neglecting the necessary actions and investments in pollution control, society has simply been living beyond its means, just as a debt ridden family which makes no provision to replace the automobile and furniture which are being depreciated. In both cases the current living standards are unrealistic, and cannot be sustained.

Pollution of Ground Water. The study indicates that a "significant health threat" exists, because of the fact that nearly one-half of the population depends upon ground water for drinking water. Ground water pollution is found in varying degrees in essentially all regions. Since water movements in aquifers are extremely slow, once polluted they may remain so for many years. Causes of ground water pollution are septic tanks, wastes from livestock yards, feedlots, seepage from municipal or community landfills, and discharge of toxic materials from any source. For that matter there are natural pollutants to aquifers, such as salt water and other mineral sources.

Quality of Drinking Water. This is a matter of great concern nationwide.In most communities great effort is constantly being extended to preserve the quality of drinking water and at great expense. In rural areas where water is obtained from private wells or springs a genuine hazard exists. The most frequently occurring ground water pollutant in all sections of the country is salinity. As water is withdrawn from pure water aquifers seepage from adjacent salt water (both inland and coastal areas) aquifers occurs.

The number of illnesses from polluted ground water declined sharply until around 1970, when the number began to increase. Most of the 4000 or so **reported** waterborne sicknesses have been of the bacterial or viral type. "The actual number of cases, including the more-difficult-to-identify chemical poisoning, could be as much as 10 times higher" (p. 66 of the U. S. Water Resources Council's report). While 40% of drinking water is ground water, there is little treatment of this except for chlorination, as contrasted with surface water which usually receives extensive treatment. There is an obvious need for greater use of testing and treatment of ground water.

Additional problems associated with water reported in the study but not related to supply are flooding, erosion and sedimentation, dredging and the problem of disposing of materials dredged, wet area drainage, and the degradation of estuaries and bays, particularly in the Great Lakes and North to Mid-Atlantic coasts.

There is yet time to correct the misuse of our vital water supply, if we are willing to settle for a little less by way of living standards. Had Congress passed legislation years ago to prohibit the sale of automobiles with lower than 30 miles per gallon performance, our present energy crisis would be long into the future. There is no doubt but that the industry would have complied. Let us hope that society, either through government mandate or otherwise will come to grips with the water problem. However, government regulation tends to concern itself with the non-essential as opposed to those areas of vital concern to all.

—Gaines M. Rogers, Dean

(Continued from Page 6)

In simulation the information concerning the probability distributions for all the variables is fed into the computer. Then the computer generates values for the variables many times over until a probability distribution can be built for the internal rate of return or whatever decision criterion is to be used.

Although the Monte Carlo technique should give better answers to the decision maker, it is as subject to errors in input as the other techniques. "Garbage in, garbage out" is a well-known computer maxim.

Summary

This article contains information on several techniques that are useful in dealing with risk in the capital budgeting decision. On an informal basis, an intuitive ranking or an adjustment in the required rate of return may be done. Sensitivity analysis would tell the decision maker where the breakeven point is—how much should be expected in the way of cash inflows or life of the project in order to earn the desired rate of return. Use of quantitative probabilities and decision trees could give information concerning the cash inflow that could realistically be expected, given certain probabilities. The coefficient of variation could give an index of risk that would be useful in comparing projects or adjusting the required rate of return. Cumulative probabilities could tell the probability of earning at least some figure such as the breakeven cash inflow. Monte Carlo simulation would allow the decision maker to evaluate risk concerning a whole range of variables such as sales, labor costs, material costs, and equipment lives.

Would these methods help Barton to make his decision? Provided he understood the limitations, these techniques could help him refine his decision. However, the answers obtained are subject to the limitations of the input. Where past experience gives a reasonable indication of the probabilities, the solutions are relatively good. For decisions in which the input is highly subjective because of lack of prior experience the answers may not be so good. In fact, the solutions obtained may be very poor because they give the appearance of great precision while being based on very imprecise estimates. The techniques are useful but must still be combined with good business judgment.

Personal Income
By Major Sources 1973-78
(Thousands of Dollars) State of Mississippi

Item	1973 1/	1974 1/	1975 2/	1976 2/	1977 2/	1978 2/
TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK 3/						
By Type						
Wage and Salary Disbursements	4,954,165	5,483,590	5,738,219	6,465,291	7,228,402	8,174,157
Other Labor Income	360,915	410,624	485,051	581,536	697,288	805,640
Proprietors Incomed 4/	1,107,039	988,556	907,595	1,034,916	1,145,982	1,287,453
Farm	574,103	416,649	278,727	345,581	419,650	486,346
Non-Farm 4/	532,936	571,907	628,868	689,335	726,332	801,107
By Industry						
Farm	671,465	547,124	384,547	481,201	564,237	624,136
Non-Farm	5,750,654	6,335,646	6,746,318	7,600,542	8,507,435	9,643,114
Private	4,514,039	4,981,878	5,292,998	6,045,861	6,795,118	7,741,640
Ag. Serv., + OR., Fish., and Other 5/	23,626	26,415	30,878	34,273	36,398	50,060
Mining	61,228	92,341	91,065	136,059	139,183	170,925
Construction	383,392	445,764	421,109	491,920	554,358	650,372
Manufacturing	1,689,304	1,816,824	1,884,384	2,217,037	2,521,365	2,827,145
Non-Durable Goods	650,588	719,555	731,646	856,902	931,845	1,035,062
Durable Goods	1,038,716	1,097,269	1,152,738	1,360,135	1,589,520	1,792,083
Transportation and Public Utilities	390,928	432,284	462,515	524,274	606,445	694,295
Wholesale Trade	279,739	332,330	419,851	460,866	500,496	567,582
Retail Trade	659,867	711,880	730,170	806,604	884,202	1,015,367
Finance, Insurance, and Real Estate	243,440	263,896	292,133	337,065	389,210	448,855
Services	782,515	660,144	960,893	1,037,763	1,163,461	1,317,039
Government and Government Enterprises	1,236,615	1,353,768	1,453,320	1,554,681	1,712,317	1,901,474
Federal, Civilian	269,379	316,459	334,980	362,324	399,021	465,939
Federal, Military	244,743	251,423	258,359	248,221	254,144	264,913
State and Local	722,493	785,886	859,981	944,136	1,059,152	1,170,622
Derivation of Personal Income by Place of Residence						
Total Labor and Proprietors Income by Place of Work	6,422,119	6,882,770	7,130,865	8,081,743	9,071,672	10,267,250
Less: Personal Contributions for Social Insurance by Place of Work	312,406	362,665	389,374	453,085	502,803	573,524
Net Labor and Proprietors Income by Place of Work	6,109,713	6,520,105	6,741,491	7,628,658	8,568,869	9,693,726
Plus: Residence Adjustment	49,659	65,210	57,210	58,451	62,855	51,103
Net Labor and Proprietors Income by Place of Residence	6,159,372	6,585,315	6,798,701	7,687,109	8,631,724	9,744,829
Plus: Dividends, Interest, and Rent 7/	734,739	874,373	984,363	1,160,463	1,307,805	1,474,867
Plus: Transfer Payments	1,101,327	1,356,193	1,677,018	1,842,025	2,015,723	2,196,393
Personal Income by Place of Residence	7,995,438	8,815,881	9,460,082	10,689,597	11,955,252	13,416,089
Per Capita Personal Income (Dollars)	3,451	3,777	4,042	4,519	5,011	5,582
Total Population (Thousands)	2,316.5	2,333.8	2,340.6	2,365.5	2,385.6	2,403.6

1/ Estimates based on 1967 SIC. 2/ Estimates based on 1972 SIC.

3/ Consists of Wage and Salary disbursements, other labor income, and proprietors' income.
Primary source for private non-farm wages: ES-202 Covered Wages - Mississippi Employment Security Commission.

4/ Includes the capital consumption adjustment for non-farm proprietors.

5/ Includes wages and salaries of U.S. Residents working for international organizations in the U.S.

7/ Includes the capital consumption adjustment for rental income of persons.

TABLE 5.00 APRIL, 1980 REGIONAL ECONOMICS INFORMATION SYSTEM
Bureau of Economic Analysis

Source: Mississippi Personal Income: Selected Years 1973-1978, Division of Business Research, Mississippi State University.

Employment By Type and Broad Industrial Sources State of Mississippi 1973-78 (Full- and Part-Time)

Item	1973^1	1974^1	1975^2	1976^2	1977^2	1978^2
Employment by Place of Work						
Total Employment 3/	979,000	990,983	953,318	992,181	1,033,060	1,066,605
Number of Proprietors	142,023	142,098	140,262	138,920	142,063	144,329
Farm Proprietors	84,467	82,181	80,358	78,569	78,533	77,501
Non Farm Proprietors	57,556	59,917	59,904	60,351	63,530	66,828
Total Wage and Salary Employment	836,977	848,885	813,056	853,261	890,997	922,276
Farm	32,922	38,000	29,000	34,400	33,400	28,400
Non Farm	804,055	810,885	784,056	818,861	857,597	893,876
Private	607,458	613,083	585,720	620,845	653,717	685,468
Ag. Serv.,For.,Fish.,and Other 4/	3,574	3,823	3,440	3,583	3,732	5,266
Mining	6,244	6,414	6,615	7,145	7,743	8,789
Construction	42,371	44,595	37,361	38,998	40,959	44,803
Manufacturing	221,027	220,204	202,005	219,471	230,849	236,020
Non Durable Goods	97,208	97,643	89,578	96,286	97,629	98,889
Durable Goods	123,819	122,561	112,427	123,185	133,220	137,131
Transportation and Public Utilities	35,328	36,143	34,403	35,394	36,723	38,827
Wholesale Trade	25,774	26,946	33,734	35,852	37,625	39,574
Retail Trade	103,479	105,475	100,065	105,197	111,430	119,932
Finance, Insurance, and Real Estate	25,050	27,098	27,733	28,459	29,992	31,948
Services	144,611	142,383	140,364	146,746	154,664	160,309
Government and Government Enterprises	196,597	197,802	198,336	198,016	203,880	208,408
Federal, Civilian	24,613	25,643	26,165	26,410	26,741	28,169
Federal, Military	43,048	42,411	40,357	38,811	38,960	38,362
State and Local	128,936	129,748	131,814	132,795	138,179	141,877

1/ Estimates based on 67 SIC.
2/ Estimates based on 72 SIC.
3/ Consists of wage and salary jobs plus number of proprietors.
4/ Includes number of jobs held by U.S. residents working for international organizations in the U.S.
Primary source for private non farm employment: ES-202 Covered Wages - Mississippi Employment Security Commission.

TABLE 25.00 APRIL, 1980

REGIONAL ECONOMIC INFORMATION SYSTEM
BUREAU OF ECONOMIC ANALYSIS

Source: Mississippi Employment: 1973-1978, Division of Business Research, Mississippi State University.

MEET THE FACULTY

Dr. E. Carl Jones

Professor and Head

Department of Finance

Dr. E. Carl is Professor and Head of the Department of Finance which includes Banking, Insurance and Real Estate. He is a graduate of the University of Southwestern Louisiana and holds the Master of Science and the Ph.D. from Louisiana State University. Prior to joining the Mississippi State University faculty in 1974, he was at Louisiana Tech University, Ruston, Louisiana for 27 years serving as Head of the Department of Economics and Finance from 1964 to 1974.

During his tenure in his current position Dr. Jones has led the Department in various programs including the development of two special Professorships, the Peter K. Lutken Chair of Insurance and the Robert W. Warren Chair of Real Estate.

Dr. Jones is a member of Omicron Delta Kappa, Beta Gamma Sigma, Delta Sigma Pi and Omicron Delta Epsilon. Professional memberships include a charter member of the Financial Management Association, the Southern Finance Association, the Southwestern Finance Association, and a charter member of the Mid-South Academy of Economists. He currently serves as a manuscript reviewer for Bobbs-Merrill Publishing Co. and Prentice-Hall, Inc. He is chairman of the Education Committee of the Mississippi Real Estate Commission and Educational Advisor to the Mississippi Association of Realtors. He is a regular contributor to the Mississippi Realtor and the Mississippi Business Journal. He is a member of the Kiwanis and the First Baptist Church.

Dr. Jones is married to the former Helen Worsham who is an Associate Broker at Starkville Real Estate. They have two children, Carol, who is a buyer for Dillars Department Stores, Little Rock, Arkansas and Kenneth, who is Marketing Specialist for Gulf Power Co. of Fort Walton Beach, Florida.

Dr. Jones primary hobby is amateur radio which allows him to talk with friends at home and abroad on a daily basis.

Tourist Briefs

Beauvoir

Biloxi, Mississippi

BEAUVOIR—the inviting atmosphere of the Old South—the last home of Confederate President Jefferson Davis. Open to the public daily except Christmas Day with admission. Located midway between downtown Biloxi and downtown Gulfport, Mississippi on the beach.

REFUGE ON THE SOUND

Nestled on the white sandy beach where Mississippi joins its coastline with the Gulf of Mexico stands a stately mansion, gleaming white and shaded by live oaks, magnolias and cedars. For one hundred twenty-eight years it has stood in its majestic splendor once representative of the French-influenced coastal cottage style of architecture. It today portrays the serene beauty of a bygone era in the midst of late twentieth century encroachment and "modern" progress. Once a single solitary house on a wind-swept beach affording the privacy of life due an aristocrat, it now shares U.S. Highway 90 with motels, hotels, restaurants, shopping malls, gasoline stations, a coliseum and a new convention center. James Brown would hardly recognize the surroundings of the summer home he built in the period of 1852-54 nor would his successor, Mrs. Sarah A. Dorsey. But it is not for these two that Beauvoir House stands today, forever enshrined in pride. It is for the reason that it was the last home of President Jefferson Davis, the Confederate States of America's first and only Chief Executive. Beauvoir is as much Davis as any of the other museums and shrines to his honor and memory across the Southland, and these are many, more than for any single United States President.

Not all will remember that Jefferson Davis was an American Patriot as well as Confederate President. Indeed, the late Dr. Hudson Strode of the University of Alabama makes of him the "Tragic Hero" in the last of his biographical trilogy on Davis. Born in Kentucky, he moved to Mississippi in 1812 at the age of four when his father, Samuel Emory Davis, a former Major in the Continental Army, settled and built "Rosemont" near Woodville, Mississippi in Wilkerson County. Young Jefferson Davis was educated alternately at St. Thomas College in Kentucky, private schools of Wilkerson County, Jefferson Military College at nearby Washington and he later returned to the state of his birth to enter Transylvania University at Lexington. He was appointed to the United States Military Academy at West Point and was graduated in 1828 after which he was posted to the frontier in Wisconsin Territory. There he met and wooed the beautiful Sarah Knox Taylor, daughter of then Colonel, later General and still later President Zachery Taylor. Disapproval of the courtship was voiced by the commanding officer who desired that his young daughter enjoy a better life than a young army lieutenant would be able to give her with the hardships of military life he and his own family had experienced were ever present in his mind. Love won out and the young couple was married on June 17, 1835 and Lieutenant Davis immediately resigned his commission and took his bride south to Mississippi where his brother, Joseph Emory Davis, gave him a large section of land at Davis Bend, southwest of Vicksburg. The plantation was named "Brierfield" by the Davises who began to till the soil and plan their home. But the scourage of the low country, swamps and marshes, malaria struck the Bend in late summer and drove the young couple south to Bayou Sara, Louisiana in early September. Each were ill with malaria fever and confined to bed. Sarah died on September 17th, a bride of only three months!

Sick and broken hearted Davis rested in New Orleans, Havana and Washington before returning to the plantation to take up a lonely vigil of work and study. For ten years he developed Brierfield and educated himself in the law and the political events that embroiled his era. In 1843 he met young Varina Anne Banks Howell of Natchez and they were married in 1845, the year he was elected to the Congress from his district. He resigned his seat to fight as a Colonel commanding the First Mississippi Rifle Regiment in the War With Mexico. He returned a hero of the Battles of Monterrey and Buena Vista to be elected to the U. S. Senate from the Magnolia State. In 1851 he resigned to campaign for Governor of Mississippi against Henry H. Foote and lost the only race he wholeheartedly strived for. He returned to Brierfield but was again called to Washington to become Secretary of War under President Franklin Pierce. While there he made many innovations which later came to haunt him and the Confederate armies in the field. In 1857 Davis was again elected to the U. S. Senate only to resign when Mississippi passed its ordinance of seccession in 1861.

In his absence the representatives of the Cotton States met in Montgomery, Alabama, formed the Confederate States of America and selected him as its Provisional President. The young nation became the all-consuming energy force of the Southern Leader and it is said that the Confederacy lasted against the overwhelming odds against it as long as it did because of the leadership and ability of President Jefferson Davis. Captured in May 1865 he was incarcerated in Fortress Monroe, Virginia for two years. Charged with treason by the radicals he was released on bond in 1867 only to be stripped of his citizenship a year later by the Congress. It would be one hundred ten years before the U. S. Congress and President Carter woul restore those rights posthumously. Davis went to Canada and Europe to regain his health. He accepted the presidency of the Carolina Life Insurance Company in Memphis, Tennessee in 1869 and served for four years. Ever desirous to write his memoirs as were the other leaders of the South and the North, he was invited to do so at Beauvoir in 1877 by the then owner, Mrs. Sarah A. Dorsey. Two years later he agreed to purchase the estate and he, Mrs. Davis and his younger daughter, Winnie, the "Daughter of the Confederacy", born in wartorn Richmond, made it their home.

At Beauvoir Davis wrote his monumental **Rise and Fall of the Confederate Government** published in two volumes in 1881. He also wrote **A Short History of the Confederate States of America** in the library pavilion on front lawn of the estate. At the same desk in 1890 his widow wrote her two-volume work on the life of her late husband **Jefferson Davis, A Memoir by his Wife.** While Mrs. Davis tended her acre of roses, the ex-President develolped his small orange grove, oyster beds and scuppernong grape arbors. Besides his writing he kept up a lively correspondence with many former Confederate leaders as well as members of his family. Guests were many as the former leaders of the Confederacy came to pay their respects and the reporters of newspapers from all over the nation journeyed to Beauvoir to get the opinion of the Confederate Executive on news events of the day. Two prominent guests were General Jubal A. Early and the English poet and novelist, Oscar Wilde. The former came frequently and the latter only once—on his American tour at the behest of Winnie and her mother. The beautiful and serene life at Beauvoir was beneficial to the President and he lived until December 6, 1889 when he died of pneumonia in New Orleans at the age of 81.

Mrs. Davis and Winnie stayed on for a year or two and took up writing in New York City to earn their livelihood. Beauvoir was struck by disastrous hurricanes in the years around the turn of the century and Mrs. Davis wanted to sell the property since she could not bear the upkeep. But, she wanted more than a mere sale. She wanted Beauvoir to be the last home of the many indigent Confederate Veterans, their wives and their widows, as was Mr. Davis' desire. More than this, she desired Beauvoir to be the Shrine to Davis equal to the Virginia Presidential Mansions already established as lasting monuments to their masters. She met with success when she sold the property to its present owners in 1902, the Mississippi Division, Sons of Confederate Veterans, Inc. That body has seen to it that her purposes and desires were carried out, working with the State of Mississippi from 1903 to 1956 in the operation of the Jefferson Davis Memorial Home for Confederate Soldiers, Wives and Widows and in the opening and operation of the Jefferson Davis Shrine since 1941.

Jefferson Davis family at Beauvoir in the 1880s. Daughter Margaret Davis Hayes, President Davis, Mrs. Davis and grandchildren with servant in the background. The magnificent home is now the Jefferson Davis Shrine at Biloxi.

(Photo courtesy Davis descendents)

Even as much as Beauvoir, overlooking the beautiful Mississippi Sound, an inlet of the Gulf of Mexico, was a refuge of hope and life to Jefferson Davis in the 1880's, today the Jefferson Davis Shrine blatently extolls the virtues of the great leader. So far as possible the house and two pavilions are there as he left them to make his last journey to Brierfield Plantation in November 1889 where he contracted his final illness. The entry hallway in Beauvoir House still bears the memory of the soirees held there by the former First Lady of the Confederacy and Winnie's grand piano stands ready to play another number to the neighboring guests of that bygone era a century ago. The Davis and Confederate Museums on the property portray the First Family's personal life and accomplishments and the tragedy of the Lost Cause, never dead, but still alive and flourishing at Beauvoir.

Over eighty thousand people from over fifty nations annually visit the shrine. A relatively small admission charge makes possible its operation and the staff of employees dedicate themselves to helping the interested visitor and student of history by entertaining discussion. A Gift Shop on the premises contains momentoes of the Confederacy mixed with simple items such as jewelry, tee shirts—and books! Books on the War from many publishers are to be found in the crowded bookshelves and the manager will be quick to point out the number one bestseller, Davis' own **Rise and Fall of the Confederate Government**, a boxed two-volume edition which sells in far greater numbers today than did the first edition written on the premises a century before. Recently Beauvoir republished a book it has reprinted in the recent past. **The Prison Life of Jefferson Davis** by Dr. John J. Craven, his northern prison physician was first in print in 1866 and now the fourth edition is on Beauvoir Gift Shop's shelves. As a character study of the Southern Leader in adversity it stands unexcelled.

As with many other private non-prifit enterprises, Beauvoir has its woes. In August 1969 the devastating winds and water of Hurricane Camille lashed at the property leaving in its wake vast destruction of property and one death. The Davis Family and the Confederate Museums were gutted with debris and several buildings on the property were demolished by a tornado accompanying the hurricane. Over $800,000 in losses was counted and the Shrine was closed for six months for repairs to take place. Again, on September 12, 1979 another Hurricane, Fredrick, less in wind velocity and with no water, hit Beauvoir causing much damage. The energy crises of 1974 and 1979 have hit the Gulf Coast tourist industry very hard and Beauvoir was not immune to the viccitudes of the times. Supperintendent Newton W. Carr, Jr., states that 1980, to date, has been an excellent year for business. He attributes it to the availability of fuel and an ever-expanding tourist advertising program on the Mississippi Gulf Coast. "Beauvoir", he states, "rises and falls with tourist promotion on the coast." The State of Mississippi and Harrison County both have tourism-related programs expounding the benefits of Middle America's nearest seashore and both have their effect upon tourism. Business has been good in 1980 with an almost 25% increase over 1979, however, inflation continues to exact its toll in expenditures. Beauvoir operates with a budget showing income derived from admission and Gift Shop profits of 90% with the remainder coming from appropriations and contributions.

Under the live oaks dripping with Spanish Moss at Beauvoir today one sees the beauty that the Davis Family saw there in the 1880s—a beauty serene and a refuge from the bitterness of the world. A refuge it is still as the many thousands can testify in making their pilgrimage to the Mecca of the Confederacy. **Beauvoir**—beautiful view in French—is aply named and the nineteenth century lives on behind its doorways. The spirit of Jefferson Davis abounds in his refuge on the Sound.

Source: Newton W. Call, Jr., Superintendent of Beauvoir.

INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969=100

Indicator	July 1980	June 1980	July 1979
Retail Sales	179.6	174.1	177.6
Electric Sales	216.7	203.4	201.3
Telephones in Service	224.2	220.9	216.2
Gasoline Gallonage	146.8	147.1	149.7
Loans of Savings & Loan Institutions	150.5	86.0	223.1

NEW AND EXPANDED INDUSTRY

Town	Firm	Product	No. of Employees
NEW			
Blue Mountain	**Woodcraft, Inc.**	Furniture Refinishing	10
Jackson	**Foremost-McKesson, Inc.**	Distribution Center	
Olive Branch	**Challenger Lighting**	Lamps	35
Walnut	**Dover Corporation**	Elevator Parts	100
EXPANDED			
Amory	**True Temper Sports, Inc.**	Metal Parts for Sports Equipment	50
Jackson	**Armstrong Cork Company**	Vinyl Asbestos Floor Tile	30

STATE ECONOMIC INDICATORS

Indicator	July 1980 [1]	June 1980 [2]	July 1979 [2]	Per Cent Change One Month Ago [3]	Per Cent Change One Year Ago [3]
EMPLOYMENT, EARNINGS AND HOURS [4]					
Total Employment (000's)	1,044,600	1,040,800	1,009,200	0.4	3.5
Non-Ag Employment	813,500	820,200	841,600	-0.8	-3.3
Mining	10,300	10,100	9,800	2.0	5.1
Contract Construction	45,400	45,300	49,600	0.2	-8.5
Manufacturing	213,200	216,600	235,700	-1.6	-9.6
Transportation and Public Utilities	42,000	42,100	41,500	-0.2	1.2
Wholesale and Retail Trade	162,100	162,000	163,700	0.1	-1.0
Finance, Insurance and Real Estate	33,200	33,200	33,200	0.0	0.0
Service	119,100	120,500	118,600	-1.2	0.4
Government	188,200	190,200	189,500	-1.1	-0.7
Unemployment Rate (Per Cent Labor Force)	8.0	8.6	6.0	— —	— —
Average Weekly Earnings in Manufacturing	204.82	207.58	192.76	1.3	6.3
Average Hourly Earnings in Manufacturing	5.39	5.35	4.93	0.8	0.2
Average Weekly Hours in Manufacturing	38.0	38.8	39.1	-0.2	-2.8
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.) [5]	3,025	2,915	3,144	3.8	- 3.8
Gasoline delivered to Dealers (gals.) [6]	119,128	116,431	121,715	2.3	-2.1
Dairy Production					
Milk (lbs.) [7]	68,000	72,000	70,000	-5.6	-2.9
Egg Production [7]	127,000	129,000	138,000	-1.6	-8.0
BANKING AND FINANCE (000's)					
Loans of Savings and Loan Associations [8]	21,300	12,800	29,100	66.4	-26.8
Construction Loans	1,500	1,600	2,800	- 6.3	-46.4
PUBLIC UTILITIES (000's)					
Sales of Electricity (KWH) [9]	2,322,733	1,944,820	2,127,500	19.4	9.2
Telephones in Service [10]	1,487,076	1,465,410	1,434,255	1.5	3.7
RETAIL SALES TAX COLLECTIONS [11]	1,235,793	1,213,179	1,153,115	1.9	7.2

Indicator	June 1980	May 1980	June 1979	Per Cent Change One Month Ago	Per Cent Change One Year Ago
AGRICULTURE (ooo's) [12]					
Total Cash Receipts from Farm Marketings	124,507	103,599	110,342	20.2	12.8
Cash Receipts from Marketing Livestock	74,968	74,222	89,843	1.0	-16.6
Cash Receipts from Marketing Crops	49,539	29,377	20,499	68.6	141.7

[1] Preliminary
[2] Revised
[3] Percent change calculated with revised figures; not comparable with previously published data.
[4] Mississippi Employment Security Commission
[5] State Oil and Gas Board for May
[6] Mississippi Motor Vehicle Comptroller
[7] Mississippi Crop and Livestock Reporting Service
[8] Federal Home Loan Bank of Little Rock
[9] Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority
[10] South Central Bell Telephone Company
[11] Mississippi Tax Commission
[12] U. S. Department of Agriculture

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago
Aberdeen	20.7	14.9	8,108	-0.8	2.8	39,263	2.7	-2.6	178,000	104,754	20,400
Baldwyn	15.5	11.4	4,682	0.0	4.3	18,573	-7.4	-2.3	——	——	——
Batesville	——	——	8,711	0.2	4.2	51,364	-0.4	6.6	593,345	299,000	127,930
Bay Springs	——	——	——	——	——	23,140	-6.8	-4.0	——	——	——
Bay St. Louis	——	——	13,468	0.7	6.2	34,124	8.3	113.2	305,310	100,150	347,405
Belmont	26.5	50.5	2,269	0.0	5.7	10,237	15.2	0.6	——	——	——
Belzoni	——	——	4,928	-0.4	5.7	29,230	17.8	26.3	24,224	13,500	43,000
Biloxi	——	——	45,316	0.1	2.2	225,750	-6.5	7.5	2,573,135	2,106,336	479,747
Brandon	30.3	25.7	11,728	0.5	-0.7	23,728	-16.6	-14.8	246,480	636,985	726,000
Brookhaven	——	——	15,977	0.8	2.3	95,285	-2.1	9.6	——	——	——
Brooksville	-9.2	41.4	1,339	-0.4	2.7	1,964	-31.1	-44.2	——	——	——
Canton	——	——	10,776	0.3	4.1	56,247	-2.3	-2.9	191,700	123,400	103,600
Carthage	——	——	7,483	-0.2	5.0	36,301	6.2	11.3	81,400	3,500	99,000
Charleston	——	——	4,122	0.3	2.9	16,738	-13.0	3.1	——	——	——
Clarksdale	——	——	20,922	-0.1	3.1	112,005	6.3	10.2	——	——	——
Cleveland	——	——	13,833	-0.5	2.4	87,625	-0.4	8.0	——	——	——
Collins	10.0	-5.5	4,654	0.1	2.8	35,559	-3.9	6.8	39,651	143,500	——
Columbia	——	——	15,713	0.1	3.5	70,042	-9.1	4.4	——	——	——
Columbus	3.1	8.3	33,106	0.1	2.3	184,710	-3.9	-6.6	484,089	416,405	163,880
Corinth	-11.4	-3.5	20,777	0.3	4.1	109,724	5.5	4.5	1,320,709	120,000	275,377
Crystal Springs	——	——	5,871	0.3	3.8	21,291	-10.9	-13.4	68,800	56,800	68,639
Drew	——	——	2,711	0.1	3.6	10,756	10.1	7.3	——	——	——
Edwards	4.9	3.1	1,670	0.0	5.2	4,598	1.4	10.4	58,900	——	50,000
Ellisville	10.7	85.0	3,894	0.8	7.4	12,743	-13.5	-3.1	——	——	——
Eupora	22.4	3.3	4,408	0.1	4.2	14,719	-11.8	-5.3	——	——	——
Fayette	-5.0	10.9	3,302	-0.7	4.3	7,760	-5.9	-2.7	——	——	——
Forest	——	20.2	5,123	0.3	4.4	49,840	-1.6	11.0	——	——	——
Greenville	——	——	37,338	-0.03	4.2	230,274	8.0	5.6	——	——	——
Greenwood	——	——	23,996	-0.2	2.7	142,574	-2.1	9.7	169,500	88,000	250,980
Grenada	——	——	14,310	0.1	4.4	67,609	-13.8	-7.1	1,725,228	91,549	815,487
Gulfport	——	——	61,312	0.2	3.7	240,940	1.9	6.3	1,504,465	703,763	618,213
Hattiesburg	9.8	——	59,150	0.1	5.1	309,589	-3.8	9.7	671,836	1,358,813	942,876
Hernando	——	52.5	7,200	0.3	6.8	20,113	-10.1	7.4	153,300	2,000	93,550
Hollandale	18.2	39.8	3,393	-0.1	6.0	13,378	15.5	-5.5	——	——	——
Holly Springs	——	——	7,370	0.4	3.7	38,555	2.3	13.6	267,000	36,000	135,500
Houston	——	——	5,641	0.3	3.2	22,433	5.2	15.1	——	——	——
Indianola	12.1	22.9	7,818	0.1	4.4	56,080	-4.0	4.9	——	——	——
Iuka	——	——	5,620	0.5	10.2	27,405	0.3	1.2	——	——	——
Jackson	13.9	——	224,724	-0.1	3.1	1,304,605	-1.5	-11.5	7,112,259	7,173,611	6,805,047
Kosciusko	-3.8	-2.7	9,498	0.3	1.4	48,579	5.8	1.9	999,693	165,000	86,400
Laurel	8.8	8.7	34,541	0.5	4.9	274,930	-51.9	40.9	513,609	1,916,617	891,929
Leland	——	——	5,208	0.2	7.2	19,379	8.1	-1.7	119,800	22,000	124,500
Lexington	——	——	4,777	0.1	3.6	18,854	-3.8	14.6	——	——	——
Louisville	12.3	15.9	10,663	0.0	3.3	44,402	-18.2	-14.1	329,100	45,545	203,500
Lucedale	——	——	8,331	0.0	5.4	32,463	-8.1	-0.3	46,200	78,000	252,305
Lumberton	——	——	2,927	0.1	2.7	7,293	-2.4	8.5	——	——	——
Macon	——	——	3,741	0.2	3.3	16,297	-0.3	6.6	——	——	——
Magee	——	——	5,326	0.2	3.0	36,477	-10.3	4.1	——	——	——
Magnolia	10.8	3.2	4,227	0.6	3.2	9,885	21.4	-4.3	11,000	12,000	20,000
Marks	4.5	10.5	5,548	0.0	4.5	17,386	1.8	19.0	——	——	——
McComb	2.1	——	19,786	0.1	3.7	113,607	6.6	20.3	400,800	259,600	411,300
Meadville	——	——	——	——	——	5,040	7.9	5.4	32,700	32,700	——
Mendenhall	——	——	6,531	-0.6	4.0	16,771	-8.5	-25.4	——	44,000	65,615
Meridian	——	——	48,043	0.2	3.1	322,300	1.1	4.9	2,351,273	342,627	818,974
Monticello	——	5.3	4,872	0.3	6.8	16,259	-11.1	-3.1	12,500	2,500	——
Morton	——	——	3,501	0.1	2.9	16,925	4.3	8.9	——	——	——
Moss Point	9.9	11.7	16,824	-0.3	2.2	41,748	8.1	33.4	200,150	299,926	80,726
Natchez	——	——	29,618	0.2	4.6	196,636	1.1	26.6	235,200	202,489	1,039,558
New Albany	35.2	——	11,225	0.3	3.9	48,775	-3.6	3.9	67,000	171,960	380,900
Newton	-8.9	-0.2	4,058	0.1	2.5	22,434	5.1	-2.0	11,000	70,200	1,056,000
Ocean Springs	16.0	-10.2	15,809	0.3	3.1	66,819	-1.0	27.6	261,710	237,300	285,818
Okolona	-4.3	11.7	3,402	-0.6	3.0	12,318	-6.5	-8.3	——	——	——
Oxford	——	——	20,668	-1.0	3.3	71,808	1.5	9.4	227,597	547,050	107,375
Pascagoula	——	——	35,093	0.8	3.8	193,139	-5.6	3.4	338,222	553,250	375,196
Pass Christian	——	——	5,578	0.3	3.1	11,838	-1.6	-2.0	96,800	55,645	300,600
Philadelphia	——	——	11,497	0.2	2.8	42,745	-4.9	-1.0	——	——	——

BUSINESS ACTIVITY BY CITY

	Bank Debits		Telephones in Service			City Sales Tax Collections			Building Permits		
				Per Cent Change			Per Cent Change				
	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago	Current Month July	Month Ago	Year Ago
Picayune	——	——	15,212	0.2	4.6	67,884	—4.6	5.4	187,500	225,000	330,008
Pontotoc	——	—2.5	9,374	0.6	2.8	33,540	—3.4	—4.1	——	——	——
Poplarville	——	——	4,134	0.1	2.9	13,119	0.9	—8.0	110,000	109,000	42,000
Port Gibson	18.4	—10.4	5,782	0.1	6.0	19,053	40.5	45.2	——	——	——
Prentiss	——	——	——	——	——	18,387	—6.7	7.4	——	70,000	10,000
Quitman	7.2	7.5	4,899	0.5	4.5	22,633	—3.0	—7.8	——	——	——
Raymond	6.9	—3.7	2,974	0.1	6.1	8,666	—1.1	—11.5	——	——	——
Richton	——	——	1,998	0.5	5.0	9,813	—15.5	—12.7	——	——	——
Rosedale	—14.7	—22.2	1,624	—0.1	1.4	6,949	—7.7	3.4	——	——	——
Ruleville	4.4	——	1,982	—0.3	0.8	13,474	15.4	13.7	106,000	119,475	114,000
Sardis	——	——	3,510	—0.5	3.5	17,240	3.2	8.8	50,000	28,100	2,000
Senatobia	——	——	6,755	1.4	5.4	36,153	—11.8	3.3	32,100	63,800	1,000
Shelby	—8.4	14.9	1,672	0.1	—1.2	12,160	9.2	14.0	——	——	——
Starkville	——	——	22,341	—0.9	—3.7	76,489	—1.6	6.7	440,000	266,000	1,231,000
Summit	——	——	1,642	0.4	4.3	8,612	0.9	2.3	——	——	——
Taylorsville	12.5	0.1	1,773	—0.3	3.3	10,841	—20.8	—26.2	——	——	——
Tchula	——	——	2,014	—0.5	1.5	5,781	50.4	59.1	——	——	——
Tunica	——	——	4,314	—0.7	4.5	16,354	—7.9	—5.5	——	——	——
Tupelo	——	——	37,539	0.2	3.5	269,838	—3.1	11.5	494,668	455,972	——
Union	3.0	—6.9	2,750	0.4	3.1	13,760	—7.3	0.6	——	——	——
Utica	—5.8	—43.2	3,011	0.1	5.1	8,080	—3.6	0.2	——	——	——
Vicksburg	11.1	9.7	38,862	—0.1	4.2	206,884	—0.2	25.7	768,427	209,750	423,002
Walnut Grove	——	——	1,034	0.6	5.7	1,465	10.7	—12.8	——	——	——
Water Valley	20.8	9.8	4,036	—0.3	3.5	20,438	—4.1	3.8	——	——	——
Waynesboro	——	——	7,582	1.0	6.4	55,475	—7.8	—0.9	7,500	58,945	1,450,000
West Point	——	18.3	12,333	0.0	4.9	46,933	—0.9	1.1	150,905	283,525	233,100
Wiggins	2.5	12.2	6,212	0.4	4.7	19,203	—16.1	—9.6	46,000	96,400	65,900
Winona	6.2	—0.3	5,045	0.4	4.4	30,126	—7.4	0.1	——	——	——
Yazoo City	31.2	34.5	12,377	0.3	4.2	62,428	5.4	4.7	——	——	——

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON [Hinds and Rankin Counties]	July 1980 [1]	June 1980	July 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	157,500	157,300	149,900	0.1	5.1
Unemployed Persons	8,100	8,800	6,100	—8.0	32.8
Per Cent of Labor Force	5.1	5.6	4.1	——	——
Employed Persons	149,400	148,500	143,800	0.6	3.9
Non Ag Wage & Salaried	128,400	128,600	123,000	—0.2	4.4
Manufacturing	18,900	18,100	18,800	4.4	0.5
TELEPHONES IN SERVICE	244,107	244,169	236,940	—0.03	3.0
CITY SALES TAX COLLECTIONS	1,349,677	1,373,777	1,523,507	—1.8	—11.4

BILOXI-GULFPORT [Hancock, Harrison and Stone Counties]	July 1980 [1]	June 1980	July 1979	Per Cent Change Month Ago	Per Cent Change Year Ago
MANPOWER DATA					
Civilian Labor Force	66,940	66,280	63,560	1.0	5.3
Unemployed Persons	3,950	4,200	3,860	6.0	2.3
Per Cent of Labor Force	5.9	6.3	6.1	——	——
Employed Persons	62,990	62,080	59,700	1.5	5.5
Non Ag Wage & Salaried	53,350	52,940	50,240	0.8	6.2
Manufacturing	9,090	8,630	8,910	5.3	2.0
TELEPHONES IN SERVICE	112,206	111,985	108,880	0.2	3.1
CITY SALES TAX COLLECTIONS	478,528	489,885	448,613	—2.3	6.7

[1] Preliminary